

Action Plan (AP) – Training Writing Fellows in the College of Sciences to support W courses

PI – Chris Osgood (Biol); co-PI – Amy Landers (Psych); paid consultant – Beth Vincelette (Writing Center); participating faculty – Ivan Ash, Phil Langlais, Doug Mills, Worth Pickering, Loreta Ulmer; invited faculty, other W course instructors in COS

Initial focus – Biology 405W (Senior Seminar) and Psychology 318W (Experimental Psychology)

1. Statement of the challenges and opportunities to be addressed

There has been a dramatic increase in the number of undergraduates pursuing degrees in the College of Sciences (COS). While this is true across the University generally, the trend has been especially pronounced in COS: an approximate increase in undergraduate majors of greater than 40% has been accompanied by essentially no growth in the number of full-time faculty. As a result, the ratio of student to faculty FTEs in COS exceeds the overall ratio for the University: 25.4 in COS versus 21 for ODU as a whole. Moreover, the ratios are particularly high in Biology (27.9) and Psychology (30.3). Each of these departments has greater than 1,000 declared undergraduate majors in 2012-13.

As a result of the dramatic increase in undergraduate enrollments in COS, we are increasingly calling on graduate TAs and undergraduate Peer Educators (PEs) to assist faculty in staffing laboratories and for support in writing-intensive courses, including the two that are targeted here. Although we rely heavily on these students for their support in our teaching mission, we do not have a formal program of instruction to prepare them for mentoring student writing skills. This can lead to uneven feedback and assessment of writing within these courses. While we believe that graduate TAs and PEs recruited from the academic departments in COS will best be able to assist in the discipline-specific writing assignments that currently comprise our W courses, providing training on how to develop student writing skills could improve their ability to support our students and faculty. We have chosen in this AP application to start small in a pilot study, with a focus on two key courses: Biology 405W (Senior Seminar) and Psychology 318W (Experimental Psychology).

The PI has used his offerings of **Biol 405W** to implement elements from the QEP training program he completed in May of 2012. Biol 405W enrolls approximately 100 students each fall and spring and is typically divided into 20-student sections in face-to-face (F2F) classroom settings. The PI is currently offering an online version of 405W to accommodate students who cannot take regularly scheduled F2F offerings. There are approximately 60 students in the online course. Biol 405W culminates in the submission of an edited term paper and a formal presentation, typically using Powerpoint. It should be noted that although Biol 405W is formally a senior level course, its pre-requisites allow many students to take the course during their junior year. This means that our PE students need not necessarily be senior year students themselves.

One challenge encountered in 405W is the participation of faculty from throughout the department who serve as mentors to students developing their Senior Seminar project, principally a review paper and oral presentation. These faculty members give generously of their time and expertise but

employ a variety of grading approaches to the papers; some use the grading rubrics designed for the course, others do not. This is understandable as their time is limited and the majority of biology faculty has not taken the QEP training. The proposed training of selected faculty (our teaching faculty are also learning from each other), graduate TAs and undergraduate PEs should allow us to better identify challenges facing the biology W course, develop solutions we can try out during the academic year, and then develop training materials for dissemination to other biology faculty, particularly those who will participate in 405W.

Psychology 318W is a challenging research methods course required of all undergraduate majors. It also satisfies the departmental W course requirement. Enrollments are typically 100-150 each semester and an online version of the course is offered by the co-PI (Dr Landers). Challenges encountered in 318W are similar to those we find in Biol 405W: there are large numbers of students, and the writing assignments are supported currently by TAs. However, those TAs receive no formal training in mentoring writing skills and the TAs are likewise expected to perform other duties leaving them little time to focus on writing skills. We know from QEP training that effective writing mentoring does not necessarily require extensive time investment, rather what one does with the available time and resources is the key to success. Providing training to the graduate TAs could help improve the quality of feedback provided to students and training the PEs could provide additional support for students enrolled in this course.

Generally trained PEs with good writing skills are very helpful, but they typically lack the disciplinary background to help students develop research methodologies, or to critically evaluate scientific literature. Identifying and training PEs from the disciplines is particularly important for the improvement of this course. Having PEs with both general writing expertise and domain-specific knowledge is an urgent need for us and thus represents an important opportunity for improvement. John Lee has identified current PEs from Biology and Psychology who will be included in the proposed workshop and course development activities described here. The PE has used a non-domain specialist as a PE for the past two semesters. He adds much to those students who take advantage of his expertise, but all too often I hear from them: but he's not a biologist, how can he really help? This is not an entirely fair criticism, nonetheless we believe that it will improve student utilization of the PE if that person has both writing and domain credentials.

2. Overall vision

We propose to offer an intensive, week-long summer workshop with the specific aim of improving instruction in the W courses offered in Biology and Psychology. The workshop will attract faculty currently or potentially involved in offering the W courses, TAs drawn from the two departments and undergraduate PEs. The workshop will look in detail at the current practices employed in the W courses, how those practices could be improved by incorporating the best practices developed by the QEP, principals and practice of assessment and the development of training modules that will carry on the AP beyond the limit of QEP support.

After we show success with these selected courses, we anticipate sharing our approaches with other W course instructors in COS, and ultimately with the QEP community campus-wide. We will also leverage relationships with other AP groups to identify additional means of reaching our students. For example, the PI is participating in another AP developed by Dr Shelley Rodrigo which focuses on using mobile technology (eg, smart-phones) to push out writing tips to our students. Such an approach may be very useful in the online offerings of Biol 405W and Psych 318W.

3. Specific strategies for improvement

Our writing fellows program will be centered on a one-week long workshop to be held in August, 2013. Participants will include the presenting faculty and a writing consultant (Beth Vincelette), attending faculty who are interested in the process and may have contributions to make based on their past experiences (Dr Langlais would fall into this category), faculty involved in teaching W courses in other COS departments (all will be invited to attend), the selected GTAs (one each from Biology and Psychology) and selected PEs (John Lee has suggested two current PEs, one from Biology and one from Psychology – and, we will add two more relying on faculty input from people like Doug Mills and Phil Langlais). Much like the original QEP training sessions, we will focus on key areas of writing pedagogy but we will then focus specifically on the two trial courses, Biol 405W and Psych 318W. Drs Osgood, Landers and Vincelette will be involved throughout the Workshop. An approximate schedule of events and lead instructors is as follows:

Day	Lead instructor(s)	Topics	Outcome
1	Remica Bingham-Risher Beth Vincelette Loreta Ulmer	Overview of QEP Writing best practices; services of WC Bb basics; Groups	Preparation of instructors for writing instruction, including strategies for assignment design and assessment, teaching strategies, and technological tips/suggestions
2	Shelley Rodrigo Amy Landers; Chris Osgood	Promotion of student interactions QEP-based approaches	Online courses present special challenges; the PI and co-PI are both experimenting with new approaches
3	Amy Landers; Chris Osgood	Syllabus and rubrics	We have begun to incorporate rubrics into our course materials; this is challenging particular for the online courses where some assignments require better rubric pedagogy
4	Worth Pickering	Assessment	We will examine course artifacts to better understand the assessment process and to search for improvements
5	All	Plans for fall roll-out; planning training modules; award certificates	

4. Assessment

A key objective for this initiative is to derive evidence to identify the effectiveness of the various QEP-based approaches that we have, or will adopt. There is scant peer-reviewed literature to support the effectiveness of writing-to-learn approaches at the college level, and none that we have found specifically focusing on the writing in the sciences. We will therefore be in the position of pioneering the techniques that we adopt for improving these courses. We expect to generate publications and conference proceedings reports describing the results of our efforts, and we will target future grant applications to federal (eg, NSF TUES programs) and private (eg, Walmart Foundation) agencies.

Assessment of our fledgling QEP initiatives has already begun. Several of us have made our W course materials available to the QEP assessment team, including written artifacts and other course materials assembled prior to the QEP and following its first introduction to our courses. This process was simplified by making one or more individuals from the assessment team “TAs” in our courses; this gives them full access to rubrics and submitted artifacts. We will continue this practice for the purpose of assessing our efforts in implementing the Writers’ Workshop for the COS. In addition to artifacts already collected, we will collect materials this spring (2013) as comparison materials for the newly implemented course revisions we will roll-out in fall of 2013 and spring 2014. This will be the case for both F2F offerings and the online versions of the two W courses that are being taught by Drs Osgood and Landers. Dr Osgood is currently tracking student participation with the part-time PE assigned to his online Biol 405W. This will allow him to monitor the impact supplemental instruction has on such variables as timeliness of assignment completion, overall grade achieved and the impact on the students reflective understanding of how their writing and thinking skills have evolved as students at ODU. Some very preliminary data indicates that PEs have a positive impact on student performance (JR Levine, *Teaching of Psychology* 17:57, 1990). There is thus a need and an opportunity for us to explore the impact of PEs on writings, specifically in the scientific disciplines.

In parallel with current QEP efforts to improve teaching practices, the PI in his offering of Biol 405W has begun to implement student and course **e-Portfolios**. These are web-based collections of student artifacts and, importantly, include reflective statements in which the students discuss the impact of the W courses on their writing skills, and more generally, on their educational experiences at ODU. The PI has found that the improvements he has incorporated into Biol 405W are transformative for at least some students: they report not just improving the quality of their writing and their confidence in their newly won skills, but also their appreciation for how science works. This is very gratifying and immediately raises the challenge of identifying what works best for these students and how to really “tweak” those aspects of the course to improve the likelihood that students will experience similar benefits. The PI is following up with this first crop of students, as well as those currently in his online offering of Biol 405W to try to understand what works best for these students. The opportunity to share this effort with the other participants in this AP should be even more effective in identifying the factors in sciences that can truly transform student

understanding and competencies. We have found that the combination of improved writing techniques combined with student reflection is indeed transformative. As noted by an authority on college-level learning: "You don't learn from experience; you learn from reflecting on experience." (Ken Bain, *What the Best College Students Do*, 2012).

We will further assess the impact of our workshop on the participants. This will be done with questionnaires and discussion at the end of the workshop, as well through regular meetings of the lead instructors, TAs and PEs throughout the coming year. We will meet at least quarterly to compare notes: What's working? Where are the problems and how can they be addressed? What are students reporting about their writing experiences?

5. Institutional support/sustainability

Many of our colleagues have generously indicated their support for this undertaking. This includes: Dr Loreta Ulmer (CLT); John Lee (SEES); Dr Worth Pickering (IRA); Dr Phil Langlais (Psychology); and Dr Doug Mills (Biology). In addition, both Biology and Psychology will contribute to the support of the TAs who will help us with the workshop and who will pilot test the new approaches that we implement or expand upon during the coming year.

As indicated earlier, a lasting contribution from this program will be the development of **training modules** that faculty across the college can access and potentially implement in their courses. Dr Osgood has already helped to prepare modules on topics related to the honor code and plagiarism, library literature-search resources and preparing student resumes and CVs. These modules are of potential interest to any of the W course instructors. In addition, we will develop materials related to topics including use of key features in Bb, developing student e-Portfolios, developing and using grading rubrics, tools effective in online courses and other areas that we identify during our workshop and in the year of course implementation (2013/14). We think these tools will considerably lower the entry barriers for faculty initiating W courses, either F2F or online. Additionally, TAs and PEs involved in supporting these courses in the future will be able to reference these training modules. Undoubtedly, the modules will require updating as better techniques and technologies are identified, but what we propose here is an important first step.

It is also our intention to include elements of the writing training modules in the GTAI training session that COS holds prior to each semester. This is currently a half-day long event in which TA presentation skills are examined. We know from comments from our current TAs that they recognize the difficulties students face in laboratory writing assignments. We believe it would be valuable to extend the COS portion of the GTAI to review basic techniques for improving student writing. Initially, the GTAs we trained at the summer workshop will assist us in developing a curriculum for the GTAI. We will realistically be able to introduce only a few innovations, perhaps the practice of using rubrics, but we believe this will be an important addition to the training of new TAs. Although the immediate impact of such training will be at the lower division level, where most TAs serve, it will ultimately impact the W courses in a positive way as these better-prepared students work their way up to the 3/400 level W courses. For this reason, we also want to invite the

participation of faculty, like Doug Mills, who teach at the lower division level and thus participate in the earliest discipline specific writing that our students encounter. A first offering of this writing module as part of the GTAI would likely occur in January of 2014.

6. Timeline

August 2013 – hold one-week training session for faculty, TAs and PEs

- Initiate introduction of best practices into fall offerings of Biol 405W and Psychology 318W (sections offered by PI and co-PI)
- Discuss likely training modules for development in the coming year

October 2013 – hold first review meeting to assess effectiveness of best practice initiation

December 2013 – assess first semester efforts, lessons learned, develop modified approaches for spring 2014; begin detailed planning of training modules for both F2F and online versions of the W courses

January 2014 – spring offerings of Biol 405W and Psych 318W employing modifications based on fall 2013 experiences; present writing improvement strategies at GTAI

April 2014 – assess success of second semester offering; complete training modules

Summer 2014 – final report to QEP; preparation of publication(s) based on course development experiences. Plan for grant submission (NSF, others). Compare experiences with other AP programs.

7. Budget

a. Summer '13 institute	
i. Faculty: 3FTEx\$1K	\$3,000
ii. GTAs: 4x\$500	\$2,000
iii. PEs: 4x\$400	\$1,600
iv. Materials: \$500	\$500
v. Meals, refreshments	\$500
b. Fall '13	
i. GTAs: 2x\$2.5K	\$5,000
ii. PEs –supported by SSC, 5hr/week each	
c. Spring '14	
i. GTAs: 2x\$2.5K	\$5,000
ii. PEs – supported by SSC	
d. Summer '14	
i. Faculty assessment, prepare final report, 2x\$1K	\$2,000
e. Total	\$19,600

8. Summary: deliverables

By the end of this project, we anticipate having accomplished the following goals:

- We will develop training methods for College TAs and PEs that will permit us to continue training and using these students in future offerings of our target courses. We also predict that other departments will adopt some of our measures once we demonstrate effectiveness in the 405W and 318W courses.
- Training materials will be developed that can easily be accessed by faculty and students in the COS which layout some of the best practices we identify and develop in the course of this project. This should make it easier for faculty to introduce writing into their current, or future courses.
- Current QEP-trained faculty, including the PI and co-PI will further hone their skills in focusing on enhancements to specific domain courses in their areas of expertise. This makes theoretical training in QEP techniques concrete and applicable to the target courses.
- Assessment will permit us to assemble data that substantiate the effectiveness of our improvements to writing instruction in the sciences. We believe that our newly employed methods from QEP are having an impact; now it is time to prove its effectiveness. In a data-driven college like ours, there is no substitute for factual demonstrations of the value of QEP principles.
- We will further bolster the case for the effectiveness of our domain-specific improvements in writing practice through peer-reviewed publication and ultimately, through seeking extramural grant support. Again, in the COS these are the gold standards and will positively impact the acceptance of the approaches we will be developing and refining during the course of this project.