

To: ANSC 311 WAC Coordinators  
CC: Dr. Terry Stewart, Professor of Animal Sciences;  
Barry Delks, Director of Career Services for Animal Sciences  
From: Fernando Sánchez, ANSC 311 WAC Coordinator 2013-2014  
Date: May 2015

### Executive Summary

This report examines the results of online surveys distributed to Animal Science (ANSC) alumni and employers during the 2014-2015 academic year. The surveys asked participants to describe the types of writing that ANSC employees produced in the workplace on a regular basis. The purpose of this report is to provide Writing Across the Curriculum (WAC) coordinators and instructors associated with the ANSC 311: Animal Breeding course with information for developing effective assignments that are tied to real-world contexts. Additionally, this report communicates which needs the WAC partnership currently addresses and which need to be better developed into the writing curriculum.

Human Subjects permission was obtained through Purdue's Internal Review Board. Afterwards, two distinct surveys were created—one for employers and one for alumni. Each asked participants to answer such questions as “what types of writing are ANSC employees regularly responsible for producing?” and “who are typical audiences for these documents?”

In coordination with Barry Delks, Director of Career Services for the Animal Sciences department at Purdue, 20 employers of ANSC graduates and 14 alumni from Purdue were contacted in the Fall of 2014 with links to their respective surveys; reminders were sent during the Spring 2015 semester. Seven employers of ANSC graduates and 11 ANSC alumni from Purdue completed surveys.

Taken together, employer and alumni participants reported that ANSC employees write to various audiences. These audiences may be internal (which may be higher-up executives or peers) or external (and may be a lay public or experts in similar fields). Results also suggest that ANSC employees need to write various genres for various purposes, but most commonly, they must write descriptive pieces and also use writing to influence decision makers in some capacity. Lastly, ANSC alumni described rhetorical awareness—defined as the ability to understand how to write in multiple situations regardless of audience or genre to clearly articulate information or an argument—as a value in their profession.

The main difference between responses that arose in the data focused on grammatical considerations. Nearly all of the employers in this data set indicated that ANSC employees needed to strengthen their grammatical knowledge and writing skills or that grammar was an important element of writing for ANSC employees to master. However, although ANSC alumni focused on rhetorical awareness as being important, few discussed grammar as being important for the writing that they perform on a regular basis. The report attempts to analyze the possible reasons for these differences.

Based on these conclusions, recommendations for WAC coordinators are (1) to be flexible with the genres that they assign in ANSC 311 because students will most likely be writing many different types of documents in the workplace; (2) to continue emphasizing rhetorical awareness, descriptive writing, and

elements of persuasive or argumentative writing in the assignments students complete because these features seem to be the most prominent regardless of what documents ANSC employees reported writing; (3) to teach grammatical aspects of writing within the context of real-world employment scenarios as well as scenarios produced by specific assignments; and (4) to articulate whether the assignments in ANSC 311 should fall under a “writing to learn” or “learning to write” model, which can change how assignments are evaluated—which would include the grammar that students use.

Additional recommendations that extend outside of the ANSC 311 class are to (1) ask visiting ANSC alumni and speakers to devote time to describing what they write and whom they write to in the workplace, along with any challenges that they face when writing; (2) conduct follow up research to determine what employers mean when they use the term “grammar” in their responses; and (3) to connect ANSC employers with the Writing Lab, which facilitates in-person and online tutorials with outside companies and organizations.

### **Context**

During the Fall semester of 2014, I approached Dr. Terry Stewart with the suggestion that an aspect of the Animal Science 311 WAC partnership be assessed. This suggestion was based on numerous factors, including my own personal research interest in assessment as well as a university-wide move to eventually bring in outside assessment into program and department-wide courses. Because such assessment, though useful, may not completely capture the usefulness of a course or what values need to be promoted in a curriculum, a local, short-term assessment was conducted in order to learn about how the WAC curriculum for Animal Science 311: Animal Breeding is meeting the needs of Animal Science majors and what changes might be necessary in order for it to align more closely with the types of writing that they may be asked to perform in the workforce.

I had considered this project for many months prior to my discussions with Dr. Stewart. During the summer of 2014, while I was preparing for my third semester as an ANSC 311 WAC coordinator, I attended numerous national writing conferences and met with multiple individuals who specialize in writing assessment work in order to determine the feasibility of this study and what issues and implications I had not considered. For example, at the International Writing Across the Curriculum Conference in Minneapolis, I consulted with Kathleen Blake Yancey on this issue, and during the Council Writing Program Administration Conference in Bloomington, IL, I met with Bob Broad to talk more in depth about this project. Both Yancey and Broad expressed support and encouraged three particular actions for this assessment project. They included:

- Conducting a “genre reality check” by contacting current employers and seeing what genres employees are asked to compose in to help determine the viability and applicability of the genres that are taught as part of the WAC partnership
- Contacting recent alumni from the program to obtain the same information regarding genre and purposes for writing

- Bringing in outside Animal Sciences professionals who had graduated from Purdue’s program and asking them to talk to current students about the type of writing that they perform on a regular basis.

Initially all three of these points were attempted, although with some minor changes. For example, while learning what genres students compose in on the job may be helpful, the fact that genres are shaped by their context may prevent WAC Coordinators from having a clear understanding of their purposes. To illustrate, a memo may communicate information differently from one setting to another. Also, respondents to survey measures may describe genres such as “maintenance logs,” which most WAC coordinators haven’t taught or may not be familiar with. Therefore, as important to learning what genres are used in the field was gaining an understanding of what purposes exist for writing in the workplace. As a result, the “genre reality check” also describes a “purpose reality check” from both employer and alumni perspectives.

Regarding bringing in outside professionals, because ANSCI currently brings in alumni to talk to ANSCI students about the types of careers that are available to them, attempts were made to reach out and ask that they devote 5 minutes to talk about the types of writing that they perform on a regular basis. However, due to only a loose connection to the ANSC 311 course, as well as hectic schedules, it was not possible to accomplish this suggestion this academic year. It remains a recommendation worth considering in the future.

In the following sections, I describe the methods used to obtain results, guide readers through the obtained data, and lay out a few recommendations based on the initial reading of the results.

### **Method**

Human Subjects approval was obtained to distribute surveys to employers and recent ANSC alumni who had taken ANSC 311 within the last ten years. Barry Delks, who oversees Career Services for the ANSC department provided a list of employer representatives (mostly recruiters) and alumni to contact based on his previous experience communicating with these individuals. Participants were chosen if Mr. Delks thought they were likely to respond. To further aid with response rates, we agreed that surveys to both populations should be kept short. Therefore, the following questions were asked to ANSC Employers:

1. Name of your Company (optional).
2. Please describe the type of work that your employees with backgrounds in Animal Sciences do on a regular basis at your company.
3. Please describe the writing that your employees with backgrounds in Animal Sciences have to do on a regular basis at your company.
4. Whom do your employees with a background in Animal Sciences have to write to on a regular basis in your company?
5. How often would you estimate that your recent employees with a background in Animal Sciences have to write to these people?
6. What writing skills or writing experiences do you look for when hiring new employees with a background in Animal Sciences?

7. What writing skills or experiences do you wish your new employees with a background in Animal Sciences learned while still in school?

ANSC alumni were asked the following questions:

1. Name (Will not be shared, will be de-identified)
2. What year did you graduate from Purdue?
3. What was your major at Purdue?
4. Briefly describe your job responsibilities and the type of company that you work for.
5. What types of writing do you do at work for your job?
6. Rank how much time you spend performing each of these types of writing.
7. Whom do you write to or for on a regular basis on the job?
8. Briefly explain why/what you write to each of the following people (from question 7)
9. What are your strengths as a writer?
10. What do you wish you could improve as a writer?

Initial requests to complete the surveys were sent out to both population groups during November 2014; a subsequent reminder was emailed in January 2015.

## Results

### Employer Surveys

Initially, 20 ANSC employer surveys were sent; seven employers responded and completed their surveys. For the sake of simplicity, the responses from the most relevant questions are displayed below.

**What type of writing do animal sciences employees perform in the field?** Employers were asked to describe the type of writing that Animal Sciences employees perform in the field. While these responses cannot account for every type of writing situation, employers report a wide variety of writing genres. These include emails, project plans, presentations, letters, training materials, reports, maintenance logs, projections, and policy documents. Table 1 highlights the most commonly referred to genres.

**Table 1: Most common writing genres, as reported by employers**

|                           |   |
|---------------------------|---|
| Emails                    | 4 |
| Plans and Policy Reports  | 5 |
| Newsletters and Bulletins | 2 |

The purposes for these types of writing seem to focus on descriptive communication of information, policies, and procedures. A few instances do seem to indicate more varied writing scenarios (“articles for popular press publications”, “sales literature” and “marketing pieces,” which focus less on description and more on other stylistic considerations such as persuasion or informal conversational conventions. Figure 1 details the responses provided by employers in full.

Figure 1: ANSC employee writing genres, as reported by employers

| Text Response   |
|---|
| <ul style="list-style-type: none"> <li>• Internal communications/emails, project plans, business/profit planning</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Emails or business letters with the intention of gaining tour groups. Training materials for tour guides including Prezi presentations, quizzes, Q&amp;As on spreadsheets</li> </ul>   |
| <ul style="list-style-type: none"> <li>• WE ALL ARE ACCOUNTABLE WEEKLY WITH A "CMR" CUSTOMER MANAGEMENT REPORT. THIS IS DONE IN A COMPANY OWNED COMPREHENSIVE PROGRAM IN EXCEL. MONTHLY, AS AN OPTIONAL ACTIVITY, WE PROVIDE OUR CUSTOMERS WITH A MONTHLY NEWSLETTER IN WORD. WE CORRESPOND WITH EXTERNAL AND INTERNAL CUSTOMERS VIA EMAIL</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Monthly regulatory compliance paperwork. Human resources people management paperwork: including employee evaluations and reviews, accident investigations and reports. Annual review of food safety regulations and making any necessary adjustment to company protocols. IDEM permits (new and renewal). Crop production reports. Equipment maintenance logs. Long term company projections. Depending on what state/national group the industry the person is involved with, there are reports and presentations associated with those positions.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Program and product recommendations tailored to specific production operations. Technical bulletins describing new production practices, new nutritional opportunities, industry articles for popular press publications. Sales literature for use by our people in the field. New product development and research ideas for submission to our research team. Program and product research results for not only internal use but also for submission to Animal Science associations. Research trial set ups and trial procedures Field trail operating procedures Standard Operating procedures Decision making models</li> </ul> |
| <ul style="list-style-type: none"> <li>• Job descriptions General email communications</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Writing stretches the gamut. We have highly trained scientists that write research reports, summaries, papers, abstracts, etc., many of which are juried by a third party when presented externally. (Ex/journals). Others must write communications, that are more suited for sales overviews and presentations, technical marketing pieces, website/interactive media content, focus group summaries, etc. The management team composes Shareholder reports, strategic intents, etc. Customer service teams communicate policies/procedures for internal and external audiences. The list could probably keep going?</li> </ul>  |

**Whom do Animal Science employees write to on a regular basis?** Overall, employers reported that Animal Science employees wrote mainly to external audiences. These ranged widely and consisted of regulatory agencies, clients, legislators, vendors and animal producers. Internal audiences consisted of peers, coworkers, and other employees as well as upper management entities. Because “colleagues” could be internal or external audiences, they were categorized separately. Table 2 highlights the frequency with which different types of audiences were referenced. Figure 2 presents employer responses in their entirety.

Table 2: Most common audiences by type, as reported by employers

|                           |    |
|---------------------------|----|
| Internal Audiences        |    |
| Coworkers/Employees/Peers | 5  |
| Management                | 3  |
| External Audiences        | 15 |

| 1   | 2   | 3                               | 4                            | 5                  |
|---|---|---------------------------------|------------------------------|--------------------|
| Colleagues  | Management                                      | Customers                       | Regulatory Agencies          |                    |
| Tour guides   | Bus drivers                                     | Potential visitors to the farms |                              |                    |
| OUR CMR IS AVAILABLE TO ALL COMPANY EMPLOYEES AS THE KEY COMMUNICATION TOOL | INTERNAL AND EXTERNAL CUSTOMERS                 |                                 |                              |                    |
| other departments within the company  | regulatory agencies                             | state/national industry groups  | legislators when appropriate |                    |
| company management personell  | other employees                                 | animal producers                | Veterinarian                 | research personell |
| Our Clients (hiring companies)  | Candidates (people looking for a career change) |                                 |                              |                    |
| Customers   | Academic Peers                                  | Internal Employees              | Business Partners            | Vendors            |
| "Colleagues"  |   |                                 |                              | 2                  |

Figure 2: Whom do ANSC employees write to, as reported by employers

**What writing skills do employers wish animal science employees had?** Clearly, employers wish that Animal Sciences students utilize proper grammar and punctuation conventions. Both of these terms are present in five (well over half) of the responses. Interestingly, "Business Writing" is mentioned twice, and although one of these references does not provide any further context, the second respondent states that "contract language" would help in thinking about properly communicating in professional settings. Figure 3 presents employers' responses in full.

Figure 3: What do employers wish ANSC employees could improve about their writing

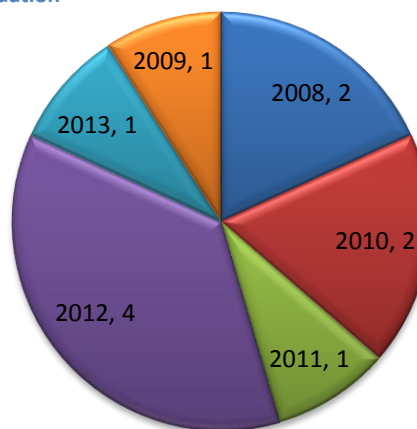
| Text Response   |
|---|
| <ul style="list-style-type: none"> <li>• How to properly address and write, grammar, proper use of punctuation</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Grammar, sentence structure, proper punctuation, and writing to different comprehension levels</li> </ul>  |
| <ul style="list-style-type: none"> <li>• AS LONG AS REPORTS UTILIZE GOOD GRAMMER, SPELLING AND PUNCTUATION WE ARE GOOD TO GO</li> </ul>   |
| <ul style="list-style-type: none"> <li>• New employees that possessed the ability to think and write critically would be an asset. The ability to read, understand, write company policy and enact new regulatory guidelines throughout the company or a department will be an important aspect of our company moving forward.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• GOOD GRAMMAR</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Business writing</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Although this is looking backward, I wish I had more practice writing business and marketing pieces, or even how to structure contract language. Most of the stuff I had to do was pretty scientific in nature. However, perhaps some of this is due to the "Science" emphasis and not the "Agribusiness" emphasis? Perhaps there is more cross-training now. Side note on generalized communications... . Maybe there is a need for basic refresher courses/classwork geared toward basic writing skillsets? (Ex/Emails should not be written like an informal texts). Hypocritically and ironically, please ignore the poor grammar usage in this survey.</li> </ul> |

### Alumni Surveys

Fourteen ANSC Alumni were contacted to respond to the survey; 11 alumni completed their surveys.

Figure 4 below represents the distribution of respondents based on their self-reported year of graduation. Years of graduation ranged from 2008 to 2013, with students from the class of 2012 providing the most responses of any graduating class (4 responses) than any other year.

Figure 4: Number of Alumni respondents by year of graduation



### Whom do Animal Science alumni write to?

Animal Science Alumni self-reported writing to a multitude of audiences. All but two respondents stated that they write to both internal and external audiences (“colleagues” and “partners” were counted as existing both as internal and external due to the ambiguity of the term). One of the two respondents seemed to write strictly to internal audiences while the other seemed to write mostly to external audiences. Overall, internal audiences seemed to be divided into audiences who were equal to or below the respondent’s place in the structural hierarchy of their organization and audiences who were above them in the organization (“supervisors, upper management”). Interestingly, the number of external

audiences mentioned nearly equaled internal audiences. Table 3 highlights the types of audiences that Animal Science alumni report writing to with frequency.

**Table 3: Types of Audiences that ANSC employees write to, as reported by alumni**

|  |    |
|--|----|
| Internal Audiences                                     |    |
| Coworkers/Employees/staff/other divisions w/in company | 7  |
| Supervisors/Upper Management                           | 5  |
| External Audiences                                     | 11 |
| "Colleagues"/"Partners"                                | 6  |

These numbers vary slightly from those reported by Animal Science employers in that Animal Science alumni list as many internal as external audiences whereas employers seem to concentrate more on external audiences. That said, both populations reported nearly the same number of audiences. Figure 5 presents the responses that Animal Science alumni reported.

**Figure 5: Audiences ANSC Employees write to, as reported by alumni**

| Most Frequent Audience                          | 2nd most Frequent Audience  | 3rd most Frequent Audience        | 4th most Frequent Audience                 | 5th most Frequent Audience                |
|---|---|-----------------------------------|--|---|
| Internal Dow AgroSciences colleagues            | Formulators/distributors of Dow AgroSciences (other chemical companies) | EPA                               |  |   |
| Fellow Naturalists that will teach the programs | Part-time staff that will adhere to policies                            | The zoo visitors                  |  |   |
| Upper management                                | other supervisors   | business partners for our company |  |   |
| my employees                                    | support divisions   | upper management                  |  |   |
| Supervisors                                     | Veterinarian  |                                   |  |   |
| Beef cattle producers                           | Indiana soybean farmers   | Indiana corn farmers              | Veterinarians and consulting nutritionists | Distributor representatives or sales reps |
| Employees                                       | Vendors   | contract growers                  | recruitment                                | Students                                  |
| Coworkers                                       | Job applicants  | College students                  |  |   |
| Vendors/Project Partners - (emails)             | Farmer Directors  | Consumer moms                     |  |   |
| Bosses or subordinates                          | Coworkers   | Academic partners                 |  |   |



**What and why do Animal Science alumni write?** In the survey, alumni were free to discuss what they wrote or why they wrote it. Once they had indicated which audiences they had written to, those answers were then migrated to the next item on the survey, which asked them to describe their writing within the context of their particular audiences.

There are several important implications that begin to emerge within these results. Firstly, it is clear that ANSC alumni are writing to numerous audiences on the job. More importantly, their writing can be categorized primarily as descriptive. Alumni had the option of naming the type of writing genres that they wrote or to discuss the purpose of these genres. As a result, some respondents noted that they wrote “medical forms” for certain audiences while others communicated that they wrote to a certain audience to “influence or explain.” Much like Animal Science employers, alumni mentioned descriptive workplace genres or description itself as being valuable in the writing that they produce. However, alumni also indicated that persuasive writing was as necessary for their writing in the workplace—much more than employers seemed to mention. Obviously, there is nothing to link these particular alumni with the employers that responded, meaning that the alumni respondents could work for different companies than where employer respondents work. What is clear, however, is that ANSC 311 students will have to write for multiple purposes through various genres. Figure 6 details the results obtained from alumni respondents.

Figure 6: What and Why do ANSC employees write to their audiences, as reported by alumni

|  |  |   |   |                                   |
|--|--|---|---|-----------------------------------|
| Various communications to all departments (commercial, legal, artwork, supply chain, regulatory) | Guidance for product labeling  | Product labels, letters, status updates, etc.                         |   |                                   |
| Lesson plans   | Procedural information   | Programming information   |   |                                   |
| communicate the business of the day  | communicate problems with their product coming to me                             | asking for new methods/products                                       |   |                                   |
| daily communication  | to gain support or an answer   | to influence or explain, daily communication                          |   |                                   |
| Training/enrichment proposals  | Medical forms  |   |   |                                   |
| Pieces describing and selling beef cattle pharmaceuticals  | Informative pieces   | Informative pieces  | Pieces describing and selling beef cattle pharmaceuticals | Explanatory pieces, announcements |
| production, work flow, personnel issues  | billing and contracts  | production, scheduling  | new hires   | Education                         |
| Everyday communications  | Job descriptions as well as job offers and answers to their questions            | Job descriptions as well as job offers and answers to their questions |   |                                   |
| Project management emails  | Project updates, leadership development plan newsletters, governance information | Displays with agricultural education content                          |   |                                   |
| Updates on current projects, information on topics of interest                                   | Updates on current projects, information on topics of interest                   | Research updates, potential research projects,                        |   |                                   |

**What writing features do Animal Science students alumni value?** The final questions of this assessment survey indirectly asked respondents to describe what they value in terms of writing. Alumni were asked to discuss their strengths and areas that they wish they could improve as writers, which implied that respondents saw these aspects as valuable for their work.

In looking through the responses gathered from both of these questions, a few values begin to emerge for Animal Science students who write in the field. Many respondents stated that a clear style is necessary for their work either as a skill that they possessed or one that needed improvement. At least six respondents stated that one of their strengths was their ability to communicate difficult or technical

information “clearly” or “articulately” through “understandable” language to others. At least two respondents noted that they would like to improve their clarity further in order to perform their job adequately. Other comments such as “Communicate my thoughts better” may also touch on clarity concerns, but there is not enough information to make that assertion.

Interestingly, respondents in this data set also seemed to communicate that as writers, they need or would like to develop a dexterity with different, more “complex” and “creative” writing styles. At least four respondents noted that they would like to improve their writing so that it was more engaging with other audiences. Figure 7 highlights the strengths that alumni reported to have as writers; Figure 8 presents alumni’s responses to what skills they would like to improve.

**Figure 7: Self-reported strengths from ANSC alumni**

|  |
|--|
| <ul style="list-style-type: none"> <li>• Detail-oriented; punctuation and grammar-minded; thoroughness; able to express in an articulate manner via written word; professionalism; combining scientific conversation with understandable language.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Concise and literal writing that is easy to understand. Elaborate on activities when needed</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Word structure, choice of words</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Ability to articulate my point, and provide great detail. I am also able to speak to many audiences, and use interpersonal savvy to allow communications to be understood and not taken the incorrect way.</li> </ul> |
| <ul style="list-style-type: none"> <li>• I believe I have strong content to my pieces of writing.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Technical communication comes easily to me - breaking down a complex subject and making it easier for farmers and producers to understand why they should know about a topic.</li> </ul>                              |
| <ul style="list-style-type: none"> <li>• I had 7 semesters of Latin in high school and received A's in my English and communications classes. I feel that I am an around decent writer.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• I am never at a loss for words</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Making difficult or more scientific topics easy to understand.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Being able to relate complex information in an understandable manner.</li> </ul>  |

Figure 8: Self-reported areas for improvement from ANSC alumni

|   |
|---|
| <ul style="list-style-type: none"> <li>• So much email can be misconstrued--I am constantly trying new ways to bring clarity and focus to the exact meaning of my messages.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Writing more articles instead of just policies and lesson plans</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Communicate my thoughts better</li> </ul>  |
| <ul style="list-style-type: none"> <li>• The ability to write more scientifically. A larger vocabulary.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• I wish to improve spelling and sentence structure.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• I wish I had more experience in a diversity of writing styles. My strength in writing lies in technical communications, but I wish I had more creative writing work to showcase for clients.</li> </ul>              |
| <ul style="list-style-type: none"> <li>• The ability to write abstracts is always a challenge.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• To be able too flawlessly have a better wording and to be able to communicate my emotions through the message that I am trying to relay.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Specific types of writing - writing for the web, for example, is a different skill than writing for a display or writing for a news release. It would be nice to have a refresher of each of these types.</li> </ul> |
| <ul style="list-style-type: none"> <li>• I wish I was better at technical writing. The most difficult part for me is how simple and boring it is. I like to utilize more complex writing.</li> </ul>  |

## Recommendations

### Emphasizing Descriptive Writing over Specific Genres

Based on these results, it seems that alumni are writing in many more genres than we can assign. While it is true that emails, memos, reports, and letters all are present in multiple responses from this population, there is very little consistency in how often they appear. This gives ANSC 311 WAC coordinators and instructors the flexibility to adopt new genres as needed. However, if new genres are chosen, they should accomplish at least two purposes. Firstly, they should mesh well with the instruction of the classroom, and secondly, they should give students more practice with a few particular values and experiences that alumni mentioned.

For example, students should learn how to write descriptively about a procedure or a policy. All 11 of the alumni respondents used words such as “inform”, “describe”, or “communicate” as particular purposes associated with their writing. Sometimes these purposes were attributed to reports, other times to newsletters or even emails and memos. Regardless of the actual genre or audience, an important takeaway here is that Animal Science 311 students should practice descriptive writing of some kind because nearly all of the respondents reported it to be a common feature of their current writing responsibilities. While many of the current ANSC 311 assignments already ask students to do this, assignments and syllabi should use as many key action verbs from Figure 6 as possible. These include “communicate”; “inform”; “describe”; “explain”; “update”; and so forth.

### Emphasizing Rhetorical Awareness

Values (in terms of what alumni self-reported as strengths and what they identified as areas for improvements) ranged widely from creative writing to writing scientifically. Clearly, while it is impossible for one class to give students experience with all of these different types of writing styles, it is important for students who write ANSC WAC assignments to be told that they will have to adapt to different writing situations and that expertise in one type of writing scenario (e.g., writing memos that explain a situation in descriptive detail) may not necessarily mean that they have mastered writing in general as they may be asked to be more “creative” in how they communicate to their audiences.

The importance of rhetorical awareness is one of the key values that we can find in this report. For example, one respondent wrote that one of his/her strengths as a writer was the ability to “use interpersonal savvy to allow communications [sic] to be understood and not taken the incorrect way.” Students in ANSC 311 are asked to compose to multiple audiences in their 3 months enrolled in the course, and it makes sense for WAC coordinators to continue to emphasize the different reactions and knowledge that each audience may bring to the a particular scenario. Here, I recommend continuing to diversify the number and types of audiences that students write to. As students will need to write descriptively to external and internal audiences as well as lay and expert audiences, it makes sense to spread these fictitious stakeholders in a way that makes sense for real-world contexts.

### **Adding more Persuasive Writing**

Many respondents mentioned that they needed to engage in some type of persuasive writing. Five of the 11 alumni respondents mentioned that their workplace writing consisted of writing proposals or internal documents that ask for a request of some kind from upper management or employees.

Even if alumni respondents don’t write argumentative pieces, they may still have to work with arguments in their daily writing practices. One respondent, for example, noted that as a recruiter s/he has to write job descriptions and send out rejection and hiring letters. This implies that as a recruiter s/he must vet numerous arguments for obtaining an interview with his or her company on a regular basis. All this to say that it may benefit ANSC 311 students to learn more about writing and identifying persuasive elements in their writing tasks.

During my time as a WAC Coordinator, multiple assignments asked students to not only repeat the knowledge that they had acquired but to apply it to a particular case involving a fictitious client looking for breeding advice. The context in which students will eventually have to “influence” an audience will vary greatly and it would not be possible for the ANSC 311 WAC assignments to anticipate every scenario, but bringing in elements of persuasive or argumentative writing may help students understand that their knowledge will frequently have to be communicated in particular ways in order to bring about some type of change in the workplace.

### **Considering Grammar**

The most obvious disparity between the writing concerns of employers and those of actual employees seems to center on the role of grammar on writing. While alumni see clarity as being one of the most important skills that they should have as writers, employers focus more on the appropriate grammatical constructions of sentences. A few things need to be mentioned here.

Few alumni responses suffered from major grammatical issues. In fact, many alumni respondents touted themselves as expert communicators despite self-reported deficiencies in creativity, vocabulary, and/or adapting to multiple contexts. It should be noted, however, that this is not a random sample of alumni. It may be that these students are outliers because they were selected for their likelihood of providing a response to the assessment, which may be connected to their attention to detail and thus may not reflect the population as a whole.

Additionally, although only two alumni used terminology that may resemble “grammar” as an area of improvement (“spelling and sentence structure” and “to have better wording”), it may be that other terms are used to stand in for “grammar” without having to name it. For example, to “communicate my thoughts better” and more practice with “complex writing” may signal grammar considerations. However, it should be reiterated that these alumni are not necessarily a random sample and that they may not be representative of whom employers are describing when they state that they wish Animal Sciences employees had better mastery of grammar.

That said, WAC coordinators should not overlook grammatical issues, particularly as nearly all of the employer respondents stated that this was something that ANSC writers needed to improve. However, the question to consider is how this can be done. In the field of Writing, we have come to understand that grammar instruction is ineffective when taught without the proper context (see Hartwell 1985; and Harris & Rowan 1989). Indeed, all writing instruction suffers if students are not asked to continue to write before they graduate and start writing on the job (Wardle 2007). While the WAC component to ANSC 311 is an important intervention that provides students with feedback on their writing (including their grammar), it may not be possible for students to retain writing instruction without a sustained emphasis on the importance of written communication throughout their other coursework.

There are, however, ways through which grammar can be brought into the forefront. One way that WAC coordinators can alert ANSC students to the importance of grammatical concerns is by increasing the amount of points that grammatical considerations are awarded in assignments. While WAC coordinators may spend time providing students with feedback such as “work on subject-verb agreement” or “try to clear up your dangling modifiers,” students may not acknowledge the importance of these recommendations if they are not worth a more substantial amount of the grade. WAC coordinators may also need to present students with an example of a letter or memo written in a real-world Animal Science workplace scenario with grammatical errors during a WAC night or lecture and ask students consider what potential employers might think of this communication document. Students might be asked to give a sense of what they think might be wrong with the letter and to keep a log of grammatical points raised during these contextualized lessons. Despite these tactics, we should be mindful of two key points.

### **Writing to Learn vs Learning to Write.**

The first is that the WAC/ANSC partnership is driven by a service model that occupies a middle space between “writing to learn” and “learning to write.” Under a “learning to write” approach to WAC, students are given short, yet meaningful assignments that will help them make better connections with the material that they are reading. A “learning to write” approach, on the other hand, stresses finished products with effective elements (such as a clear thesis). Letters and annotations can be implemented in service to either model a “writing to learn” model, which is evident in these ANSC 311 WAC assignments. Students are asked to explore ideas and find ways of applying readings to real life situations. At the same time, students are evaluated on particular elements of their writing. WAC Coordinators should be mindful of how they would like to tip the scales of this partnership (whether toward Writing to Learn or Learning to Write) as they make decisions about how to score assignments and prioritize elements of writing instruction.

### **What is meant by “grammar”?**

Secondly, Based on the limited data that is available from this survey, we do not have enough information ascertain what employer respondents meant when they pointed to “grammar” as a deficiency in ANSC employees. This could refer to spelling, mechanics, sentence construction, or even appropriate vocabulary and style. Having a more concrete understanding of what grammar errors occur most frequently may help WAC coordinators prioritize instruction in a way that connects grammar to students’ writing context. Clearly, more work needs to be done here to determine what areas in particular are implicated with the umbrella term “grammar” for this specific population. If possible, follow up interviews or focus groups should be conducted with these or other employers to gain a more comprehensive idea of how the term is being used.

### **Looking Beyond the Classroom**

At least one alumnus respondent and one employer respondent each mentioned being interested in workshops or “refresher” courses that may teach important writing techniques or genre conventions. Purdue’s Writing Lab already provides numerous tutorials to outside companies and organizations through face-to-face and distance methods. If there appears to be a more widespread call for these types of services from ANSC employees and employers, it would be beneficial if members of the ANSC Department and the Purdue Writing Lab met to discuss the possibility of promoting these services to employers of ANSC graduates. Statements that ask for more writing instruction in the workplace communicate that writing is an important skill that employees continue to develop even after they have been working for a couple of years.

### **Conclusion and Next Steps**

This assessment project has provided us an important glimpse into the types of writing that Animal Sciences alumni produce in the workplace from the perspective of former ANSC 311 students and from employers who hire candidates with Animal Sciences backgrounds. Both employers and alumni indicated that ANSC students need experience reporting detailed information to a multitude of expert,

lay, internal, and external audiences. However, alumni reported a larger emphasis on persuasive and argumentative writing than did employers. The biggest point of contention seems to be the place of grammar as more employers emphasized attention to grammatical concerns than did alumni. Moving forward, the following opportunities for continued work exist:

- **Research:** Local Animal Sciences employers should be contacted for face to face interviews or focus groups and asked to bring de-identified examples of writing produced by Animal Sciences employees that they feel contain grammatical errors in order to ascertain what is meant by “grammar” more precisely. Results would help to refine pedagogical implications.
- **Pedagogy:** Animal Sciences 311 WAC coordinators should keep as many of the recommendations above in mind as possible when they redesign WAC assignments.
- **Administration:** Another attempt to coordinate with the speakers who are brought in by the ANSC department should be made. Ideally, as these speakers are already discussing the kind of work that they perform in the field, it should not detract substantially to ask them to spend no more than 5 minutes talking about the types of written and verbal communication that they are responsible for in the workplace. Also, attempts should be made to articulate whether this partnership should focus more on “learning to write” or “writing to learn.”



Appendix: References

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