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Writing for Flow

Many students do not write sentences that flow well. No surprise. It’s not easy to do. Here is an exercise that may help students to think about and practice writing that flows.

1. Yesterday, I flew a kite for my birthday.

Ask students to continue to write a story that starts with a given sentence. Tell the students that each subsequent sentence must use a word, especially an important word, that appears in the preceding sentence. For example:

Yesterday, I flew a kite for my birthday. I always fly kites on special days. Special days are ones where something important takes place. Importance can be Thanksgiving, 4th of July, an anniversary, or anything that matters or makes me happy. What makes me happy is when each year my family and friends all visit me, and bring me presents, and tell me how much they like me. That’s why they call it Happy Birthday.

Here is the kind of thing that you don’t want.

Yesterday, I flew a kite for my birthday. I don’t know why my best friend didn’t want to come. It rained after that. The day before was my sister’s wedding.

2. Now you and a partner try.

The tension between equity and excellence characterizes American public education.
Give your students better writing feedback. A practical guide for instructors.

Few practices promote student learning as effectively as well-formed writing assignments paired with personal, constructive feedback. Of course, giving useful feedback can be time-consuming and has limited value if students don’t read or act on it.

By following some simple feedback best practices instructors can mitigate these communication challenges. The goal of this guide is to present feedback tips in a clear, practical format that you can quickly absorb and apply to your classroom.

01.

Writing promotes learning
Writing activities promote high-level recall, organized thinking and clear expression.

Key points:
- Writing is one of the most effective learning activities.
- To be effective, writing needs to be paired with effective feedback and the opportunity for revision.
- Too often, the feedback we provide our students isn’t helping.

Beyond English class

Everyone writes essays in English class but writing activities pay dividends in any domain. We’ve known this for a while. It’s one of the reasons writing across the curriculum (WAC) programs have gained popularity since the 1980s.

At the most basic level, writing requires students to recall knowledge rather than just recognize it (e.g., a multiple-choice question). With more complex writing activities, students must retrieve information, link it with related concepts, then organize and express those ideas in their own words. There’s evidence that this retrieval process produces...
more learning than even the most thorough study session.

The point is not just to produce better writers (though of course this doesn’t hurt). When students write about content, they learn it better. So most educators agree students should be writing in almost every class — including math, science, finance, economics, and humanities.

**Effective writing requires good feedback**

Like any pedagogical tool, the positive effects of writing can be greatly reduced by flawed implementation.

The biggest factor that influences the effect of writing activities is the nature of the feedback students receive. At the extreme end of the spectrum, students may receive no feedback at all. Or perhaps only receive a grade with no comments about their specific performance.

As a result, students get some writing practice but generally don’t improve and don’t learn the material better.

**Your feedback probably stinks**

*nothing personal ;)*

More commonly, students receive feedback but it doesn’t do a whole lot of good. Kluger and DeNisi[6] conducted a meta-analysis of studies of feedback and found that the average effect of writing feedback intervention on performance was quite positive.

However, 38 percent of the time the control group actually outperformed the feedback groups leading the researchers to conclude that the effects of feedback depend on the nature of the feedback.[4]

Much of the feedback we provide students simply isn’t helpful. Feedback to students “might be delayed, not relevant or informative, it might focus on low level learning goals or might be overwhelming in quantity or deficient in tone (i.e. too critical).”[5]

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### Purpose of writing feedback

Writing feedback is not just about finding mistakes. It is about providing clear guidance for the student’s next step.

**Key points:**

- Unlike editing, feedback should give students a clear idea of how to improve.
- Feedback needs to be specific and clear.
- Feedback is essential for both strong and weak students.
If you're not allowing revisions, you're doing it wrong

Writing loses its potency when it becomes a one-time event instead of an ongoing process. Students should be writing multiple drafts and improving their work each time with the help of a writing guide. Given the chance, most students will "engage in an iterative discourse about their writing"[1] which promotes engagement, time on task, and meaningful student learning.

Too often, students are given just one shot at an assignment for a grade. But this doesn't give them the opportunity to take the advice given and improve. There is little room for risk taking, experimentation and practice.

Instead, students need to be given opportunities to close the gap between current and desired performance. This means giving students a chance to improve through revisions guided by appropriate feedback.

Feedback must be prompt

Most importantly, this revision cycle needs to happen as rapidly as possible. One study found that more than 40% of institutions provided feedback that was too late to be useful.[2] When it takes a week or two to get feedback to students, the flow of the learning process breaks and students tend to lose interest in the assignment.

Prompt feedback guides students when they can still recall what they did and thought at the time they wrote the paper. Plus, they are still motivated to improve their work.

Feedback should be timely

It's also important for the revision cycle to occur before the unit is over. Students should receive feedback on their paper about photosynthesis before the photosynthesis unit is over. Otherwise, the learning that occurs as a result of the writing activity can't be applied anywhere else.

This can also help teachers. Having your students write is one of the best ways to get inside their heads and assess their level of understanding. By providing feedback to students before a topic is over, you give yourself the chance to adjust content or teaching strategies based on actual learning needs.

Be sure your feedback has consequences

Feedback isn't helpful unless the student is forced to respond to it. It is not uncommon to correct the same errors on a particular student's work over and over again. This is because the student is not taking your advice, or not being required to do so.

Sometimes students are lazy or just don't get it. But teachers can take steps to make feedback consequential, forcing students to address your comments. When a student submits a revision, it might be a good idea to
The primary purpose of feedback is...

Writing feedback should offer students clear and specific guidance of how to improve their performance.

Feedback is not editing

Feedback is not the same thing as editing. It is much more than making a few red marks on a paper.

One study[14] found that most students complained that their writing feedback was too general and vague with no suggestions for improvement. Students report that they are often left not knowing what they have done well, what they need to change and why they have achieved the grade they have.

Feedback is about guidance. Diagnosis of what is wrong can be part of the process, but it must be accompanied by clear suggestions for improvement: “Here’s what’s wrong and here’s how to fix it.”

The goal is to leave students with a clear message about what they must do to improve future submissions.

Feedback is for every student

Weak students often receive better and more frequent feedback than strong students. This is reasonable to a point, but studies have shown that strong students often suffer from this disproportionate attention.

It’s tempting to scribble “Excellent!” on a good student’s paper and quickly move on. But this doesn’t help the student gain insight into what they did well and what they could do to enhance their performance. Even the best students need your guidance to improve.

Getting the most out of writing feedback

Your strategy for writing must include revisions accompanied by prompt, timely feedback.

Key points:

- Writing is a process not a one-time event. Students need to be given multiple opportunities to get it right.
- Your feedback should be prompt (quick revision cycle) and timely (before unit is over).
- Tired of correcting the same mistakes over and over again? Take steps to force students to address your feedback.
feedback.

Making this process transparent to the class as a whole can help students learn from their peers as well.

04.

Becoming a feedback guru

Providing students with organized comments.

Key points:

- Provide students with grading criteria before they begin writing.
- Understand the differences between error correction and content critique, and prioritize your content comments over your error corrections.
- Understand the difference between proximate vs. holistic feedback, and be sure to provide holistic feedback.
- Limit yourself to three or four major suggestions for improvement.

4a. Provide assessment criteria in advance

Good feedback begins before students submit anything. Let’s call it “feedforward”. Students need written guidelines for the assignment grading criteria in advance. This provides a roadmap to success and helps to clarify the features of good performance.

One study showed that tutors and students often had quite different conceptions about the goals and criteria for essays and that poor essay performance correlated with the degree of mismatch.

An agreed upon assessment criteria makes sure everyone is on the same page. Instructors can benefit from this strategy as well, since it ensures you have well defined goals for every writing assignment.

After students submit, it is important to relate all feedback to the original assessment criteria. Students should get a specific sense of what they have achieved in progressing towards goal (set forth in your assessment criteria) and what they have yet to achieve.

4b. Error correction vs. content critique

There are two main types of comments you can offer your students: error correction and content/ideas critique.

**Content/ideas critique** focuses on "what you write".

These comments evaluate the student’s ability to write a focused

**Error correction** emphasizes "how you write".

Much like proof-reading the focus is on writing mechanics like spelling
paper with support and a logical
development of ideas.

Though both types of feedback can point students in the right direction, teachers tend to emphasize error correction more than they should. There is some evidence that directly critiquing students' mechanical errors isn't very helpful. Instead, students should be encouraged to proof-read their own work or get help from their peers.

If you do decide to include both types of feedback, it's important to clearly divide your comments into one category or the other, and prioritize your content comments over your error corrections.

### 4.6 Proximate vs. holistic feedback

Feedback can be either proximate or holistic.

**Proximate** *(selective/analytic/componential)* feedback is usually embedded in the student's text or in the margins.

- It typically involves marking mistakes or making suggestions related to a specific word or sentence in the student's work.

**Holistic (comprehensive) feedback** means displaying your comments as endnotes on the top or bottom of the page.

- It typically focuses on major points of advice related to the student's work as a whole.

Much of the time, proximate feedback is used for error correction, while holistic feedback focuses on content and idea development (see above).

Studies have shown that proximate comments are easier for teachers, but students prefer holistic feedback because it gives them just a few things to concentrate on as they make revisions.

### 4.7 Provide indirect feedback

Feedback shouldn't give away the answers. This is often called indirect feedback.

This means telling students they made an error, but not giving away the answer or doing their work for them. Remember, feedback is about providing guidance. Assist students to think about a better approach then let them figure out the details.

Start with higher-order concerns *(support of ideas)* and move the lower-order problems *(mechanics).*
Stick to 3-4 main ideas

Feedback comments should be limited to three or four major suggestions. This might mean restraining yourself from pointing out every single mistake or suggesting every improvement that comes to mind.

Too much feedback can prompt anxiety. No student likes to receive back a paper filled with red marks.

More importantly, an overwhelming amount of feedback prevents the student from acting on your comments. When revising, a student can only attend to a handful of ideas. Your feedback should help them decide what is most important to improve, even if the end result isn’t perfect.

Emotional considerations

When providing feedback you are not only affecting the student’s knowledge, you are impacting their motivation and self-image.

Key points:

- Students typically see feedback as critical and judgemental. Go out of your way to be supportive and positive.
- Balance your positive and negative comments in terms of volume and specificity.
- Reduce the amount of feedback you provide over time to encourage self-regulation.

Keep your tone positive

By default, many students misunderstand the purpose of feedback and see it as judgment instead of enabling learning. Keep this in mind and go out of your way to be supportive and positive.

Judgmental or critical comments can undermine a student’s motivation and impede the learning process. The best writers are empowered and motivated to improve. So in addition to pointing out ways to improve, your feedback should encourage the student and keep them engaged in the writing task.

One effective way to strike the right tone is to simply express the way you (the reader) experienced the essay as it was read. Rather than adopting an authoritative tone, you can communicate your human reaction and suggest ways to improve the impact of what was written.

Start with positive and keep it balanced
Students will react better to feedback if you begin with positive comments. Then add some constructive criticism, but keep it balanced with the positive feedback.

Students often complain feedback has too much focus on the negative, and that negative comments are usually more specific than positive ones. Keep the balance between positive and negative. And offer specific positive comments along with specific negative comments.

**Encourage self-regulation**

We provide feedback not only to improve a particular writing performance, but to enable students to become better at assessing their own work. Providing regular, frequent feedback encourages "better monitoring and self-regulation of progress by students." And better self-regulators achieve more.

In light of this, it often makes sense to reduce the amount of feedback you provide over time. Feedback on more basic ideas can be eliminated later as the student learns to self-regulate those aspects of their work.

Another way to encourage self-assessment skills is to have students provide feedback to their peers. Evaluation skills that students use on their peer's work can translate to their own performance.

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**Additional resources**

Some fantastic resources for in-depth exploration.

- **Working with Student Writing: Grading Essays**
  University of California Berkeley

- **Giving Feedback On Students' Written Work**
  Seamus O'Muircheartaigh at DevelopingTeachers.com

- **13 Ways of Looking at Responding to Student Writing**
  Doug Hesse, The University of Denver

- **Using video to provide interactive feedback**
  Ann Arbor.com

- **Grading and Commenting**
  Texas A&M Writing Center

- **Teaching with Writing: responding and grading**
  University of Minnesota

- **Providing Feedback on ESI Students' Written Assignments**
  The Internet TESL Journal

- **Giving Effective Feedback on Student Writing**
  Monica Stutts-Ing at University of Hawai'i at Manoa

- **Improving Student Writing: Using Feedback as a Teaching Tool**
  Shelley Staggs Peterson, OISE/University of Toronto
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Improving Student Writing

Using Feedback as a Teaching Tool

By Shelley Stagg Peterson
OISE/University of Toronto

Teachers provide feedback on student writing to support students’ writing development and nurture their confidence as writers. Teacher feedback often takes the form of written comments on their final graded compositions. Received by students at the end of their writing process, these comments rarely have as great an impact on students’ writing development as teachers intend. Students generally feel that they have finished working on the writing when they hand it in for a grade. While praise and high grades may instill greater confidence in some students’ abilities as writers, few students are interested in incorporating feedback to improve compositions for which they’ve already received grades.

Given that teachers spend a great deal of time providing written feedback to students, it is important that the feedback have a greater influence on students’ writing development. Verbal or written feedback can be a powerful teaching tool if it is given while students are in the process of writing drafts. Comments on drafts of writing provide students with timely information about the clarity and impact of their writing. When students receive feedback while they are writing, they are more inclined to use it to revise and edit their drafts than they would be if they received the suggestions on a graded, polished copy. They also have an immediate opportunity to try out the suggestions in their writing, allowing for meaningful application of what they have learned from the feedback. Focusing on individual students’ immediate writing needs, this ongoing feedback is a form of differentiated instruction that complements the teaching of mini lessons to small groups or to the whole class.

The teaching tools discussed below support all students, Grades 4 to 12.
Teacher Feedback

Teacher feedback should be both criterion-based and reader-based. Criterion-based feedback indicates how well the writing meets the criteria on scoring guides or rubrics. This feedback refers to features such as the appropriateness of the ideas and information, the level of detail and the chosen point of view. Criterion-based feedback also addresses the clarity of communication through the organization of ideas and use of writing conventions and effective language. This type of feedback is most useful when students have previously been given the assessment criteria and have a clear understanding of the expectations. Indeed, students gain a deeper understanding of the expectations when they have an opportunity to participate in determining the assessment criteria.

Reader-based feedback reflects the reader’s experience of the writing. Such feedback identifies images visualized, emotions evoked and words or phrases that had the greatest impact on the reader. It also describes how the writing makes the reader feel and summarizes what the writing says to the reader. Because writing is a form of communication, student writers benefit from reader-based feedback, as they get a sense of how well their writing achieves the intended communicative purpose (e.g., to entertain, inform or persuade).

Teachers can determine the content of the feedback by considering the elements of the writing that are strong or that need more work. It is important to identify positive features of the writing. Although students have indicated that they do not always find positive comments helpful to improve their writing, they appreciate receiving praise to nurture their confidence as writers and their motivation to write. Students say that they find elaborated comments on specific elements of their writing most helpful in guiding their revisions. They appreciate teachers getting involved with the subject of their writing, but do not like to have their ideas questioned or criticized.

Creating Spaces for Feedback

Verbal Feedback from the Teacher

Verbal feedback may be given as teachers circulate around the room while students are writing. Students may request their teachers’ input, or teachers may offer a commendation or suggestion as students draft and revise their writing. Verbal feedback may also be given in student-teacher conferences. Students may sign up to meet with their teacher when they feel ready for feedback, or they may meet with teachers on a regular basis. Effective as both teaching and assessment tools, student-teacher conferences provide individualized instruction for students and opportunities to gather information about students’ thinking and writing processes.

Student-teacher conferences are most effective when there is a dialogue between student and teacher, with each learning something from the interaction. The student may ask for help in a particular area or ask what effect the writing has on the teacher-as-reader; the teacher may ask about the students’ goals (for both their writing and for themselves as writers), their impressions of the strongest parts of their writing and their thoughts on what they have learned through writing a particular composition.

Scheduling one-on-one time with students is always difficult. It is not necessary to read and respond to every student’s writing every week. Reasonably, teachers should aim to provide feedback to each student in five to ten minute student-teacher conferences, every two to three weeks. It is important to keep a record of the topics of these conferences, to create an ongoing picture of students’ writing development.

Teachers can use the notes to praise students for the improvements they see from one conference to the next. Students can use the notes to reflect on the challenges they have had in trying to achieve goals set in previous conferences.
Peer Feedback on Student Writing

Research shows that peers can also make helpful contributions to students' writing development. They provide reader-based feedback that shows student writers the effect that the writing is having on a peer audience (often the intended audience for elementary students' writing).

Peer feedback helps to develop student writers' sense of audience – their recognition of the perspectives, language, sentence structure, voice and other elements of writing that provoke, entertain or satisfy their audience. In classrooms where desks are arranged so that students can easily talk to each other, students may ask peers for feedback spontaneously, as they feel it is needed.

Teachers may set up more formal opportunities for peer feedback by scheduling time for students to exchange their writing with peers or to read compositions aloud to peers in a small group setting. A reading is followed by a discussion of what the peers got out of the writing, what stands out about the writing and what questions the writing raises. Many teachers use a "two stars and a wish" framework, asking peers to identify two elements of students' writing that they thought were strong and one element that could be improved.

Teachers may model effective dialogue when giving and receiving feedback on writing, showing how the student writers can ask questions, talk about their intentions and identify parts that they felt were strong or weak, in conversation with peers who talk about their impressions.

Peer feedback should be valued for the information it provides about how readers respond to a piece of writing. However, peers are not the best providers of criterion-based feedback, because they often do not have the needed grasp of conventions. Teacher feedback is generally more useful for moving students along in their use of writing conventions.

Implications for Classroom Practice

Student Autonomy for Using Feedback

Students feel a greater commitment to improving their writing when they have the autonomy to decide whether or not to incorporate the feedback in subsequent drafts. Students should always feel that they may use the feedback in their own way – that the feedback is suggestive, rather than prescriptive.

To support students' sense of ownership of their writing, feedback should:

- be given in the spirit of showing student writers the positive effects their writing has on readers
- identify potential areas where students may revise their writing to clarify meaning or more fully engage readers
- take the form of suggestions, observations and open-ended questions, rather than instructions and criticisms

Student writers will not be able to benefit from feedback that they do not fully understand. Invite students to:

- explain their interpretations of the feedback and speculate what they might do to use the feedback (explaining their plans for using the feedback may also strengthen commitment to improving their writing) and
- submit a "revise-and-resubmit" letter, explaining how the feedback has been addressed, or providing a rationale for disregarding it (writing such letters enhances students' metacognitive awareness of their writing processes and intentions.)

Ways to build students' sense of ownership ....

- Show student writers the positive effects their writing has on readers.
- Identify potential areas where students may revise their writing to clarify meaning or more fully engage readers.
- Provide suggestions, observations and open-ended questions, rather than instructions and criticisms.

Students say that they find elaborated comments on specific elements of their writing most helpful in guiding their revisions.
Timing of Feedback

Feedback on writing is most valuable to students' writing development when it takes place at the beginning and middle stages of the writing process. This is the time when students can use the feedback to revise and edit their writing.

- Allot a small percentage of the final grade to handing in a draft by a certain date or at particular intervals.
- Automatically give the grade to students who hand in the drafts.
- Write comments on the drafts, which the students may use when making revisions.
- Mark the final copies by assigning a grade and writing a few comments, noting how the students have improved their writing subsequent to handing in the initial drafts.

- Give feedback on the content, organization and style features of the writing in early drafts.
  - If students focus on writing conventions early in the writing process, their flow of ideas may be curtailed.
  - In addition, students may edit sentences that will later be cut during revisions.
- Give feedback on adherence to writing conventions when the writing is almost complete.  
  - Focus on one or two features of the writing that could be improved.
  - Identify patterns of convention errors, rather than every error in the paper.
  - Students are more likely to learn how to use a convention correctly if they attend exclusively to that type of error when editing their writing.

In Sum

Student writers learn about the power of writing when peers and their teacher provide reader-based feedback about what they learned, what engaged them and what evoked strong emotions. Criterion-based feedback, particularly from teachers, allows students to see how closely specific features of their writing match the expectations for that writing. Responsive to students' immediate needs, verbal and written feedback provided on drafts of students' writing is a powerful tool to support students writing development.

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Providing Feedback on ESL Students' Written Assignments

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This paper looks at ways of providing effective feedback on English language learners' written assignments. It examines some of the more common methods of feedback and why they are at times ineffective. It also looks at effectual ways of providing feedback as well as student preferences for feedback. Suggestions and examples for providing effective feedback are provided.

Introduction

Written feedback is an essential aspect of any English language writing course. This is especially true now with the predominance of the process approach to writing that requires some kind of second party feedback, usually the instructor, on student drafts. So dependant is current writing instruction on instructor feedback that Kroll (2001) describes it as one of the two components most central to any writing course with the other being the assignments the students are given. The goal of feedback is to teach skills that help students improve their writing proficiency to the point where they are cognizant of what is expected of them as writers and are able to produce it with minimal errors and maximum clarity.

Common Practices

The most prominently used methods feedback fall into two common categories: feedback on form and feedback on content.

The most common methods of feedback on form are outright teacher correction of surface errors, teacher markings that indicate the place and type of error but without correction, and underlining to indicate only the presence of errors. The first requires students to copy the corrections and the latter two require students to correct the errors on their own.

Feedback on content consists mainly of comments written by teachers on drafts that usually point out problems and offer suggestions for improvements on future rewrites. Students are usually expected to incorporate information from the comments into other versions of their papers.

What Is Not Working

There are several faults that lie with traditional methods of correcting grammatical errors. The outright correction of surface errors has been found to be inconsistent, unclear and overemphasizes the negative (Frogeau, 1999; Cohen, & Cavalcanti, 1990). Moreover, when this type of feedback is given, students for the most part simply copy the corrections into their subsequent drafts or final copies. The vast majority of students do not record nor study the mistakes noted in the feedback. Having students merely copy
teacher corrections into rewrites is a passive action that does not teach students how to recognize or correct errors on their own. Fregeau discovered that the method of teachers indicating the presence or types of errors without correction is also ineffective. Many times the students do not understand why the errors were indicated and simply guess the corrections as they rewrite. Other ineffective aspects of the marking of student errors are that it causes students to focus more on surface errors that on the clarity of their ideas, and it only stresses the negative.

Just as with feedback on form, many faults have been found with standard practices of providing feedback on content (Coher, & Cavalcanti, 1990; Leki, 1990; Fregeau, 1999; Fathman & Walley, 1990). Fathman and Walley, as well as Fregeau report that teacher feedback on content in the form of teacher comments is often vague, contradictory, unsystematic and inconsistent. This leads to various reactions by students including confusion, frustration and neglect of the comments. Leki reports that when presented with written feedback on content, students react in three main ways. The students may not read the annotations at all, may read them but not understand them, or may understand them but not know how to respond to them. Teacher comments on content are of little use if students do not know what they mean or how to use them productively to improve their skills as writers. Finally, Fathman and Walley note, much like correction of grammar mistakes, comments on content tend to be negative and point out problems more than tell students what they are doing right.

What Is Working

Despite these negative aspects, there are effective points to some of the common methods of teacher feedback. Fathman and Walley (1990) discovered that when students receive grammar feedback that indicated the place but not type of errors, the students significantly improved their grammar scores on subsequent rewrites of the papers. This idea is echoed by Frodenes (2001), who notes that indirect feedback is more useful than direct correction.

Written feedback has also been found to be effective when it is coupled with student-teacher conferencing (Breender, 1998; Fregeau, 1999). As noted earlier, many students find understanding written feedback problematic. Conferencing allows both students and teachers a chance to trace the causes of the problems arising from student writing and feedback, and to develop strategies for improvement. During these sessions, teachers can ask direct questions to students in order to gain a deeper understanding of student writings. Also, students are able to express their ideas more clearly in writing and to get clarification on any comments that teachers have made. Finally, teachers can use conferencing to assist students with any specific problems related to their writing.

What Students Want

One important aspect of feedback that is often overlooked is the desires of students as to the kinds of feedback they wish to receive. Fregeau (1999) notes that students want to participate in a process approach to writing that allows for multiple rewrites as well as conferencing of some sort. Breender (1998) asserts that students want to take part in conferencing and find it more effective than written comments. Lek (1990) points out that students prefer error correction methods that label mistakes and let them make corrections on their own. Finally, Cohen and Cavalcanti (1990) mention that students want to have some kind of feedback pertaining to the content of their writings.

Suggestions for Appropriate and Effective Feedback

Teachers have to come up with an effective method of feedback that takes into account the shortcomings of each method and uses them in combination to create an effective approach to feedback on student writing.
of common methods of feedback, the positive aspects of them and the desires of students. The goals of a particular writing course are one of the main factors that need to be considered when determining how to provide feedback. Feedback that is a mismatch with assignment or course goals may be one of the factors contributing to students not knowing how to properly respond to it. Among these are consideration of course and assignment goals, the stage of the writing process and the form of the feedback.

Aside from the aforementioned effectiveness of marking errors for student self-correction, other methods of feedback on grammar can be productive in improving students' writing skills. To lessen student confusion, teachers should consistently use a standard set of symbols or markings to indicate place and type of error and train the students in what kinds of corrections to make based on each symbol. Lists of proofreading symbols can easily be found in most writing textbooks, or teachers can create their own. Furthermore, teachers should familiarize students with the system so they will not be surprised when new symbols occur.

Many of the same kinds of improvements that can be made for feedback on form can also be made for feedback on content. The failure of written comments dealing with content comes from a combination of using inconsistent, unclear comments along with not training students in how to properly use the feedback to improve. Teachers should consistently use a standard set of clear and direct comments and questions to indicate place and type of content feedback. These types of comments and questions should focus students' attention on the content of the composition and the process they followed instead of merely pointing out areas that the teacher found interesting or lacking. As Leki (1990) points out, these kinds of questions and comments can be used to create a dialog between the student and the teacher in order to give both a clearer understanding of how the assignment was and should be conceived and executed. Furthermore, teachers should, as with grammar, familiarize students with the types of comments that will be used and train students in how to make use of the comments. Without training in how to use the comments to better their writing, students are likely to either ignore the comments, misunderstand them, or fail to use them constructively (Cohen, & Cavalcanti, 1990; Kroll, 2001).

The comments that the teachers use and training that they give students can be further developed in individual conferences. Aside from using conferences to determine if students understand and are making use of feedback, teachers can also use them to explain their comments to the students. Conferences are an excellent time for teachers and students to ask direct questions to each other and uncover any misunderstandings by either party. One way to do this would be to present students with pre-conference sheets that allow them to prepare questions for the teacher beforehand. Likewise, the teacher should also prepare a list of comments and questions before the conference.

Examples

I developed the following and found them to be very effective in providing feedback to my EFL students and fostering improvement in their writing skills.

Questions for Consideration when Giving Feedback

General Questions

1. Is the feedback consistent with the goals of the course?
2. Is the feedback consistent with the goals of the assignment?
3. Is the feedback consistent with the goals for this phase of the assignment?
4. Is the form of the feedback consistent with the three previous questions?
Form

1. Is the feedback clear and easy for the students to understand?
2. Did I use the system and symbols that I made the students aware of?
3. Have I consistently marked the same error or types of errors?
4. Have I only marked errors that I told the students I would or that I covered in class?
5. Have I marked anything not gone over in class? Why?
6. Will the student know what to do with the feedback?
7. Did I correct the errors or mark it for the students to correct? Why?

Content

1. Is the feedback clear and easy for the students to see and understand?
2. Did I use the system and symbols that I made the students aware of?
3. Have I consistently marked the same error or types of errors?
4. Have I made only negative comments or did I also add some praise?
5. Did I rewrite student words? Why?
6. Did I make any specific comments or ask direct questions? Why?
7. Are the comments I wrote specific to content and problems that we are covering or have covered in class?

Comments for Feedback on Content

I usually insert the numbers instead of writing out the comments.

1. I like this very much.
2. This is a good example.
3. Tell me more about this.
4. Can you think of another example?
5. Do you have a personal example about this?
6. Can you make this clearer?
7. Can you think of another way to say this?
8. Why do you think so?
9. Is this paragraph complete?
10. Do you think this is necessary? Why or why not?
11. Should this paragraph be divided?
12. Is your thesis clear?
13. Are your topic sentences clear?
14. You are repeating yourself here.
15. I am not sure what you mean.

Conferences

Pre-conference Questions for Students

1. Were there any comments or markings that you did not understand?
2. Were there any comments or markings that you understood but were not sure what to do with?
3. Were there any other things about the assignments or class that you have questions about?
Pre-conference Questions for Teachers

1. What aspects of this course/assignment are the student performing well on?
2. What aspects of the course/assignment do the student need to improve on? How?
3. Are there any errors that are consistent?
4. Are there any other points to cover in the conference?

Conclusion

To sum up, most of the frequently used and relied on methods of teacher feedback on written assignments are ineffective when it comes to developing and promoting students' English writing skills. Methods such as outright correction of surface errors, inconsistently marking errors, unclear and vague responses on content have all been found to have little positive and some negative impact on student writing skills. They can lead to feelings of confusion and frustration as well as passive action and indifference on behalf of the students. Teachers need to develop more systemized and consistent forms of feedback that take advantage of the process approach and make it clear to students what the feedback means and what they are to do with it. Moreover, teachers need to familiarize and train students in how to effectively use the feedback in order to make gains in their proficiency and competence as English writers.

References


The Internet TESL Journal, Vol. IX, No. 10, October 2003
http://iteslj.org/

http://iteslj.org/Techniques/Williams-Feedback.html
A Feedback Exercise.

(This is an exercise in explicitness, the single most important criterion of feedback after timeliness.)

The team has submitted an interim report. The professor reads the report and comments:

_The paper has some good ideas and most the sources are relevant. The team needs, however, to better organize the piece, write sentences that flow more smoothly and create a more logical sequence among the sources. Also, proofread. On the whole, though, it's an adequate start. C+

Make the feedback much more helpful._
BUVANIC
Public Feedback Review

What do I think about public classroom review of student writing? What have I tried? What have I found, or think I would find, that is positive? What is negative? How can I accentuate the positive and mollorate the negative?
The POWER of PEERS

Raise the bar on the quality of student learning by drawing on students' intrinsic interest in one another's work.

Rob Traver

Even the best teachers ask themselves how they can motivate students to do well. One potential answer: Engage students in looking at—and learning from—one another's work. In classrooms that adopt these practices, students examine the efforts of their peers, discuss what is good and what needs to be done, and set out to improve their work.

What follows is a look into three such classrooms. In one case, students take part in a public critique of their classmates' work. In the two others, students respond to anonymous efforts in math and writing, but what's important is that the work has been done by students just like them, not drawn from arbitrary examples in a textbook. The point in common: When we capitalize on students' natural interest in their peers' work, we can foster motivated classrooms where they reach for—and meet—high standards.
A First Draft

“Who has the red-flag pencil?” an instructor asks in an engineering class. “Please offer the team a warm, positive comment about their presentation slide” (see fig. 1, p. 70).

A student raises a pencil topped with a red flag and says, “I really like the color scheme. The flame colors go well with the topic of the project, Structure Fire Gas Emissions.”

The instructor continues. “Okay, good. Who has the blue-flag pencil? Do you have a cool comment—a suggestion or question—that might help improve the slide?”

The student with the blue-flag pencil chimes in. “Yes, the colors are good, but the slide only has text. If it had some pictures, charts, or something graphic, I think it might be better.”

What is going on here? Students in the class are preparing for project presentations. Working in teams of four, they have one slide and four minutes to inform the audience about their project. The rest of the students critique the slide and presentation.

After the warm compliment and cool suggestion are on the floor, the teacher opens the discussion to the whole class, first asking for more compliments.

“The horizontal display of the three parts of the proposal work really well,” says one student.

Another adds, “Well, it’s just a little thing, but the black spots for the bullet numbers look like coals, like you get from a fire. That’s cool.”

The audience also offers feedback on the delivery of the four-minute presentation, noting where the team members made good transitions between different parts of the talk and when someone was really articulate about one of the points.

Afterward, the teacher shifts to cool suggestions, reminding students to “be critical, but be nice.” Several hands go up.

“I’m not sure, but I thought the team said something about a fifth kind of calculation,” one student says. “Your slide says there are four. I’m confused.”

“I don’t know what the SHPI logo means at the bottom of the slide. Is that your sponsor? Maybe you need to say more about them, or leave out the logo,” notes a second student.

The class also offers critiques on the delivery. Among them: “Kristina needs to talk a little louder” and “The introduction was too long and so everyone else didn’t have enough time.”

Hearing the comment about speaking louder, Kristina looks discouraged. The look on her face conveys that this has long been a struggle for her. But overall the presenting team has been trained to listen and take in the comments.

When we capitalize on students’ natural interest in their peers’ work, we can foster motivated classrooms where students reach for—and meet—high standards.

students stand quietly. One person, with a tablet in hand, notes the class’s feedback. There is only so much time in the class, and the point of the exercise is to collect as much feedback as possible. Later, the team can decide what they want to use, modify, or reject.

At the end of about six minutes of feedback, the team retires to a round of applause. They take their seats before the next team makes its presentation.

Practice and Repeat
The teams present their talks again one week later. It’s evident that they’ve worked on their slides and delivery;
you can even overhear teammates checking with one another about timing, volume, and emphasis. Review and practice have strengthened their presentations, and they’re looking forward to showing their classmates what they’ve accomplished.

It’s the Structure Fire Gas Emissions team’s turn again. The new slide flashes on the screen, and there are audible “oohs” and “ahhss” from the class. The re-designed slide is striking (see fig. 2). With the slide displayed, the team delivers its presentation again.

The feedback routine is the same. First, the teacher asks for the red-flag feedback (the building graphic clarifies the purpose of the project, says a student) and blue-flag suggestion (the black arrow is too big and out of scale with the buildings and text boxes, says another).

Then the class offers more warm comments, which include: “The addition of the aggregate box now makes the five models easier to understand” and “I could hear everyone this time.”

Students offer several thoughtful cool suggestions. Among them, one student says, “Last time we thought that maybe the sponsor logo was a problem, but now that it is gone, it seems like it should be put back. It’s important that we acknowledge our sponsors and explain why we’re doing our projects. I know the logo color scheme clashes with the fire colors, but I still think it should be there.”

The Payoff
The following week, the teams make their final presentations for an audience of faculty, family, and friends. The students are professionally dressed, confident, and ready to go. After the six teams give their presentations and answer follow-up questions, the room bursts into applause. It’s not gratuitous. The presentations are professional grade.

On the way out of the room, a mother turns to the instructor, “I’ve never seen my daughter look so confident,” she says. “I hid in the back of the room—she told me to—but I could still hear her. She’s never been able to speak publicly like that before. I’m so proud.”

Students’ reflections about the peer-review process reveal similar insights and revelations. “It works really well when we have to look at one another’s presentations and make both positive and negative comments,” one student writes. “It helps you learn how to give constructive feedback—and accept it.”

“It’s the revisions that work so well,” another class member says. “Lots of teachers ask for presentations, but you only get to try once, so you never make it better. Here, we got to practice.”

A third student offers: “After I made a comment about another team’s presentation, I got to thinking I should probably do that [in my presentation], too.”

**Student Buy-In**
The opportunity to look at and provide feedback about other students’ work shouldn’t be reserved for upper-level students. Elementary students can learn from the process as well.

In her classroom, 3rd grade teacher Kris displays two answers—shown in Figures 3 and 4—to a math problem. The responses, she tells the class, come from two 3rd graders who took the previous year’s high-stakes statewide exam.

Kris highlights the prompt at the top of the box, tells students to look at the problems for a minute or two, and then asks, “What do you notice?”
FIGURE 3. 3rd Grade Math Response (Score 2 out of 2)

Two fractions are shown below
\[
\frac{2}{8} \quad \frac{2}{3}
\]

A. Write a number sentence to compare.

\[
\frac{2}{8} \quad \frac{2}{3}
\]

Use <, >, or = in your number sentence.

\[
2 \quad \square \quad 2
\]

B. Draw a model that shows your number sentence is correct.

Student mathematics examples courtesy of the Massachusetts Department of Education, MCAS Mathematics, Grade 3, 2014.

"The kids always watch one another, so an example from them uses their natural desire to compare with everybody else."

Student: The pictures in the first answer are better.

Kris: How is that?

Student: Well, the pieces of the pies are the same size.

Kris: Really? They look different to me.

Student: No, in the pie with three pieces in the first answer, the three pieces are the same size. And the pie with eight pieces has the same sizes.

Kris: And that's not the case for the second student?

Student: No, the pieces (in each) of the pies are different sizes.

Kris: Oh, I see what you mean, but why is that important?

Student: Because it doesn't [correctly] show the sizes of the fractions.

Kris: Right. The better drawing shows that the pieces in each pie must be the same size so you can see the fractions clearly.

Kris moves the lesson along by asking students to write some rules for themselves that will help them answer questions like the one on display.

Her students offer multiple ideas:

Circle the important parts of the question; make the parts of the pie equal; draw carefully; and make sure the inequality symbol points in the correct direction.

Afterward, Kris presents the class with a similar math question—one that calls for them to compare two fractions in a mathematical sentence and to complete a pie chart model. She uses the time to review the concepts behind fraction size, simple math sentences, and graph models of fractions. Kris tells the students that when they understand math this well, it will be easy to get the full score for this test item, just like in the first student's work they studied.

Later in the day, Kris talks with another teacher about her lesson.

"Sounds like what we all do," says her colleague. "We show the kids..."
an example, point out the important parts, and let them try it on their own.”

Kris agrees, but argues that there is a difference.

When I start by showing the students what other students have done, it's intrinsically more interesting than just an example from the book or worksheet. The kids always watch one another, so an example from them uses their natural desire to compare with everybody else. Also, because the answer comes from an exam setting, it's real. People are always interested about other people in “high-risk” situations. I don’t think kids are different. And, well, I think letting them try a similar kind of question right away gets them to follow the model.

**Revise and Rewrite**

The same concept holds true in writing. Students who look at the writing of their peers learn a lot about what differentiates strong writing from weak writing. And why shouldn’t they? Professional writers attend workshops where they listen to others’ narratives, read examples, write, and learn from the instructor and peer critique.

With young students, it is especially helpful to provide a strong example and a weak example side by side. This makes it easier for the students to identify differences.

For example, Kay, a 4th grade teacher, posts two pieces of writing for her students to study (see figs. 5 and 6 online at www.ascd.org/4046traver). She tells her class that other 4th graders wrote these stories for an important test. Here is the prompt:

*You are finally old enough to babysit, and your first job is this afternoon! You will be spending the entire afternoon with a one-year-old. When you open the door you realize that instead of watching a one-year-old child, you will be watching a one-year-old elephant! Write a story about spending your afternoon with a baby elephant. Give enough details to show readers what your afternoon is like babysitting the elephant.*

Kay reads the two compositions aloud. At the end she asks, “Well, what do you think? The stories are clearly different, but how?”

One student says that the second sample is better. “There are more things in the story, like what happens,” he says. Kay prompts the student to say more, ultimately eliciting that there are more details and that the author uses dialogue to help tell the story.

“Is that more interesting,” adds another student. “Sometimes you don’t know what is happening, then you learn it.”

Kay asks for an example.

“When she screams, you wonder, what’s wrong? Then she tells you: it’s an elephant,” the student responds.

“Very good,” affirms Kay. “Authors help us like their stories by making us wonder what is going to happen next.”

And then there’s the realism in the group. “I don’t like the stories,” counters one boy. When Kay asks why, he says matter-of-factly, “Nobody babysits an elephant.”

But in Kay’s mind, there’s a point to be made about literature. “You’re right in a way. When we read a story, it’s important that we believe it’s real. Think about fantasy or space travel stories. Well-written stories make us believe, even if they’re pretend. But if pretend stories are badly written, they bother us. This story bothers at least one of us.”

Kay then turns the class’s attention to the first story, asking students to improve it. She instructs students to add dialogue and adjectives—perhaps describing the house in which the elephant lives.

Kay likes the idea of asking the students to improve an existing story that was started by someone else. That way, the students aren’t invested in telling “their story,” an investment that is often hard to set aside when changes must be made. With someone else’s story, it’s easier to see what might be done, and the students love the idea of helping another student writer, even if they don’t know who the student is. Later on, it’s easier to show students how to rewrite and do similar editing on their own compositions.

**The Challenge of Good Work**

Teachers like Kay know that there are more effective and less effective ways to teach writing. She believes that showing students other students’ work, critiquing it, and trying to make improvements is powerful because it aligns with the way that most people learn.

Students are naturally inclined to watch their peers, to make suggestions and support them, to avoid mistakes, to copy what works and modify what doesn’t, and to learn from one another. By building on the authentic desire to do well, teachers tap into a deep-seated motivation and elicit remarkably well-formed, high-quality ideas. It makes the challenge and achievement of good work much more manageable and attainable for kids—and a whole lot more enjoyable to teach.

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REQUEST FOR PEER REVIEW. SEE THIRD PARAGRAPH.

ENVS 1100
E'16

Final Paper

The final paper asks you to explore a topic in environmental studies that interests you. You may investigate any area that we have examined, such as demography, economics, ethics and values, or policy and law. Within these you may want to focus on a particular issue (pollution, global warming, animal rights), a person (Hardin, Ostrom, Carsen), or a text (Silent Spring, Tragedy of the Commons, Kyoto Protocol), a theme (wilderness, sustainability, externality, resources), or an agency or institution (EPA, environmental action group, religious group's relation to nature).

The paper should, foremost, reveal what you have learned. In can be conceptual, mathematical, or descriptive; but whatever the genre, tell what you know now that you did not know before in a way that is systemic and clear. For example, you can say that you were unfamiliar with the many facets of the debate about GMOs. Then you present those facets, noting how they are affecting the way you think about the topic. You are not supposed to argue for and against something, persuade or dissuade someone. You are to show how you are in a new place, intellectually and/or ethically, in regard to some environmental thing.

The paper should be about five pages (1250 words give or take 10%). Good writing is at a premium. Have someone read the paper before the final version. Please give the name of the reader and the date and time in which the review took place. Please provide a list of their comments on the copy you submit.

The paper is due Wednesday, 29 June at the beginning of class. (I will ask each of you to read from your paper.) If I receive a draft by Monday, 20 June, I'll return the draft with comments in class on Wednesday, 22 June. Drafts received on 22 June will be returned with comments on Friday, 24 June. (See the mail folder outside the door of my office, 329 SL.) If I don't see a draft copy by Wednesday, you're on your own.

The paper is worth 150 points.
The purpose of this document is to present the assignments that are used in Food Sustainability to prepare the students for the poster session. The document includes the assignments as they were given to students, and it provides commentary on various aspects of their use. In this document, the assignments appear in 10 point and the commentary in 12 point font. All eight Learning Outcomes are addressed through these 9 assignments.

This past year (2012) we limited project work to B-Term and used nine assignments to guide the student teams. The nine assignments are:

1) Project Overview and Timeline,
2) Problem Statement,
3) A Template for Crafting a Problem Statement,
4) A Source Analysis Rubric,
5) In-class Workshop (Moving from Problem-statement to Project objectives),
6) Problem Statement Revised and Refined with Presentation,
7) Assessing Your Proposed Solution,
8) Promoting Your Proposed Solution, and
9) Putting It All Together.

When writing the assignments we tried hard to be very explicit. This explicitness appears in our effort to write succinct and supportive descriptions (sometimes in the form of a rubric), remind students of deadlines, and, probably most importantly, specify the point value of the overall assignment and its various sections. In some cases there are no points because the assignment was completed as an in-class exercise. In all cases, the assignment was read aloud with the class. Students had a copy in hand while another was projected. We believe we communicated well because students may have had trouble completing an assignment but they never said they didn’t know what they were supposed to be trying to do; nor did we encounter any scoring issues.

In addition to writing explicit descriptions and scoring standards, we tried to create assignments that explicitly coached students. For example, Assignment 3, A Template for Crafting a Problem Statement, tries to walk the student through the process of moving a vague or general idea to one that is more specific, authoritative, and feasible. Furthermore, we frequently asked student teams to present these developments or iterations to the class. Such an activity can be seen in Assignment 6, Problem Statement Revised and Refined with Presentation. In many ways, we saw the GPS poster session as a grand performance and our classes were rehearsals or practice sessions to ready the students to perform well.

1. Project Overview and Timeline. This assignment is presented the first day of class B-Term. As mentioned, it is reviewed line by line, date by date with the students. Questions and comments are encouraged and throughout the overview the tone is one of high expectation, we are here to
help, it will be hard but worthwhile, others have done this before and you will do well. We also
show examples of exemplary posters, run videos of GPS students presenting their work and
talking about the project process, and ask PLA to talk about their experience with projects in the
GPS.

1. Food Sustainability
   Fall 2012
   Project Overview and Timeline
   Due 12/10

Solving a Food Problem

The final project requires you to identify a food problem, propose solutions, and market or promote your
suggestions. Indeed, you will present your study along with others in the class in a poster session to be held in the
Odeum on Monday, 10 December, 10-12 am. Your work will be viewed by members of the WPI community
including faculty, students, staff and alumni. A substantive report will accompany the poster presentation.

Overall, there are five parts to the poster and paper: 1) problem statement (identification, impact, cause), 2)
solutions, 3) approaches, means, mechanisms, 4) plan for assessment, and 5) benefit/cost.

You should keep in mind Martin Burt's two questions: Is it worth doing? Can it be done? Within these, first identify
a significant problem. Then consider solutions. From these, determine how you will implement the solution. Be sure
you utilize the thinking and efforts of other organizations that address the same problem. In addition, plan how you
will assess the effectiveness of what you propose, what is your plan for assessment. Finally, be prepared to identify
costs and benefits as quantitatively as possible. In the course of all this problem solving, you must keep your
audience in mind -- who are you trying to convince? How will you do that? What is an effective way to convince
that target group? You should be constantly talking about and revising your plan, making it more and more detailed
and convincing.

Because this is an ambitious project, there is a corresponding dedication of time. We will use a large proportion of
classes to the production of the different components of the poster and paper and to present interim results to one
another. There are several assignments and deadlines which are set to make successful projects a likelihood for all.

There are many problems when it comes to ensuring that everyone in the world has sufficient food quality and
quantity. It is possible that you can develop an effective plan for Darfur, southeast Asia, the Peruvian highlands, or
even rural America. But you may find it easier to follow René Dubos' advice, Think Globally; Act Locally, when
selecting a project. There is much to be done with, for example, food waste at WPI, feeding the hungry in
Worcester and Worcester County, increasing the availability of quality food in markets in Massachusetts, alerting
fellow students to extant hunger relief and development organizations, mobilizing local and state politicians and
other policy makers, supporting regional research on food products, and so on. In the end, it is not the scale of
problem that you tackle but the completeness with which you define your problem and provide a feasible and, even
better, appealing solution.

Timeline of Project Components:
10/24: Identify category of problem to think about. Join Team.
10/25: Preliminary Project Ideas
10/29: Begin Library Research
11/1: Fully articulated problem statement is ready
11/8: 2 Potential Solutions with approaches, means, mechanisms
11/15: Assessment Plan,
11/26, 12/3: Draft of Report Submitted
11/29: Review Poster in Class. Promotional material in draft and available
12/4: Poster submitted to ATC for printing
12/5: Putting It All Together PowerPoint
12/10: Poster Exhibition in Odeum
2. Problem Statement Assignment. Assignments 2, 3 and 4 work together. They stress the importance of a clear, doable problem and provide step by step guidance on how to craft the statement and select supporting references. There is a premium placed on succinctness. The process takes about a week, with both out-of-class and in-class activity. Problem statement refinement requires coaching, and both instructors and all PLA’s actively work with student teams. The classroom becomes a writing workshop.

2. Food Sustainability
Fall 2012
Final Project
Due 11/1

Problem Statement Assignment (25 points)

Prepare a fully articulated problem statement for your project. The statement should include the following:

Definition of the problem: Clearly state the problem and cite at least 3 current (within the last 5 years) peer-reviewed references that support your claim that this issue is in fact a problem. Don’t just list your sources, but briefly indicate how they support your claim. Be quantitative wherever possible. 5 points

Statement of impact: Explain clearly and succinctly the impact of the problem. Where and when do you see the impact? Cite at least 3 current (within the last 5 years) peer-reviewed references that support your claim about this impact. Don’t just list your sources, but briefly indicate how they support your claim about impact. 5 points

Cause of the problem: What is the cause or conceptual basis? Cite at least 3 current (within the last 5 years) peer-reviewed references that indicate the cause of this problem. Don’t just list your sources, but briefly indicate how they support your claim. 5 points

Bibliography: Please include full bibliographical information, properly formatted in APA style, for all the sources you cite. (See GPS Source Analysis Rubric). 5 points

Clarity, mechanics: Clearly and correctly written with no wasted words. 5 points

3. A Template for Crafting a Problem Statement. Note how this assignment, one of three that help the student develop a problem statement, disaggregates the challenge of writing a problem statement and of determining how sources are used to develop and support it.

3. Food Sustainability
Fall 2012
Final Project

A Template for Crafting a Problem Statement
1. In no more than 2 sentences, define the problem that the research will address? Remember, a problem is something that is “going wrong.”

**Who?** List three current, peer-reviewed references that support the presence of that problem. Briefly describe the nature of that support.

A. Source:
   How does this source support the presence of the problem?

B. Source:
   How does this source support the presence of the problem?

C. Source:
   How does this source support the presence of the problem?

2. In no more than 2 sentences, assess the impact of the problem. Be quantitative. When and where is the problem evident? How many people, quantity of acreage, size of dead zone, etc.

**Who?** List 3 current, peer-reviewed references that support the impact of the problem that the research proposes addressing. Briefly describe the nature of that support.

A. Source:
   How does this source support the impact of the problem?

B. Source:
   How does this source support the impact of the problem?

C. Source:
   How does this source support the impact of the problem?
3. In no more than 2 sentences, identify the cause of the problem. That is, what does the literature outline as the cause of the problem?

Who? List 3 current, peer-reviewed references that support identification of this as the cause of the problem. Briefly describe the nature of that support.

A. Source:
How does this source support this as the cause of the problem?

B. Source:
How does this source support this as the cause of the problem?

C. Source:
How does this source support this as the cause of the problem?

4. Source Analysis. The explicit role of sources in the development of a problem statement can be conceptually problematic for students. This confusion can be mitigated by the use of a rubric, a powerful tool for clarifying expectations and helping students meet them.

4VGPS Source Analysis (for use with Problem Statement Template)
Students Name:

Intended learning outcome assessed with this instrument: Ability to find and cite relevant, high quality sources of information to support final project.

Student work assessed: Final Project

<table>
<thead>
<tr>
<th>Number of Sources</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than nine sources are provided.</td>
<td>Nine sources are provided</td>
<td>Six or more sources are provided</td>
<td>Fewer than six sources are provided.</td>
<td></td>
</tr>
<tr>
<td>Nature of Sources</td>
<td>Sources include a balance of scholarly research, news, trade publications, and websites.</td>
<td>There is some scholarly research but most sources are news, trade publications, and websites.</td>
<td>There is little scholarly research. Most sources are news, trade publications, and websites.</td>
<td>There is very little variety in types of sources used. There a heavy reliance on one type of source, for example, websites.</td>
</tr>
</tbody>
</table>
5. Moving from problem statement to problem objective. The purpose of this assignment is to move the student toward an operational definition of the problem statement. A series of seven questions guide the development of the solution. These questions and their answers are undertaken in class through extensive interaction with instructors and PLAs. Note that the teams must create two solutions. The request for two solutions directly confronts the “silver bullet” mentality that accompanies novice problem solving.

5. Food Sustainability
Fall 2012
Final Project
Issue 11/1; In class 11/5; Due 11/8
In-class workshop: Moving from problem statement to project objectives

You’ve identified a problem, described its impact and presented its underlying cause. Now you need to develop 2 solutions and, for each solution, a feasible approach to solving it. We’re asking you to begin formulating these in class today, although you’ll probably need to do more research before your objectives are complete and specific. For today, begin with a feasible approach (e.g., mandate smaller catches in Lake Victoria). Write your feasible approach here:

Then ask yourselves the following questions:

1. What information do we need to know to fulfill the objective?

2. Why do we need to know it?

3. What kind(s) of data will answer the question?

4. Where can these data be found?
5. How will we access these data?

6. What's our timeline for gathering these data?

7. What methods are most useful for this type of data collection? If you would like to know about a range of research methods often used in IOPs, see:

http://my.wpi.edu/webapps/portal/frameset.jsp?tab=community&url=%2Fbin%2Fcommon%2Fcourse.pl%3Fcourse_id%3D_123571_1

6. Problem Statement Revised and Refined with Presentation. The revision of the problem statement has two goals, 1) quantify and 2) compare and contrast the two proposed solutions. The compare and contrast objective is highlighted by an in-class presentation activity. The student-team poses both solutions to classmates and instructors, fields questions, and asks which solution the audience thinks might work best. This public critique is a powerful learning experience for the student teams.

6. Food Sustainability
Fall 2012
Final Project
Due 11/8

Problem Statement Revised and Refined (25 points) with Presentation

We are asking that you further refine your problem statement and begin to identify solutions. It would be best if you could formulate a single sentence statement, but that might not be possible for all of you.

Then, elaborate as much as you can on the impact. Be as quantitative as possible. How many Worcester families are without ready access to food? What percentage of pregnant mothers need nutritional information? How much manure is entering Chesapeake Bay?

Finally, return to your cause(s) and make them as quantitative as you can. For instance, the problem may be that fish stocks are depleted in Lake Victoria in Africa. Before you propose solving that problem by reintroducing fish stocks, you better make sure that the problem isn't really that the lake has developed an acid pH that kills the fish, rather than overfishing. Your solution (project) might be prove not to be a solution if it does not address the source or cause of the problem. Always be quantitative.

Once you have a discrete problem and an underlying cause, you can then begin to propose solutions. You have begun doing this already, but before you get too wedded to your ideas, go back and make sure that you are solving the right problem.

Think of two ways to address the problem, two solutions. One will be plan A. The other will be plan B.

Produce and identify at least two potential solutions to the problem that you have selected. For each solution, you need to have an approach, means or mechanism to implement the solution. For instance if you are concerned about the fish depletion in Lake Victoria (and are sure that overfishing is the cause), one potential solution is to mandate smaller catches by the local fishermen. How could that be done? Another potential solution would be to restock the lake with baby fish. How could that be done? A third might be to provide the local populations with an alternative source of meat so that they rely significantly less on the fish for their protein needs. Each of these alternatives arrives at the same ultimate end: a net increase of fish in Lake Victoria. But the solutions and their approaches are very different.
The solutions you propose must be feasible, not science fiction. For instance, you cannot propose to place a game warden on every fishing boat in the lake. Or, should you propose policy or regulation to limit fish catch, you must present a workable idea for how it will be implemented and enforced. What are the penalties for breaking the law?

Your solutions should be based on data. For example, if you want to reduce fish catch to a sustainable level, specify by how much, and base those specifications on what is known about the Lake Victoria fishery. This will require more digging in the literature.

What you need to hand in:
Restate the problem, impact and cause. This time there must be some quantitative measure of the problem/impact/cause. (5 pts)

Identify 2 different approaches, means, mechanisms to solve the problem. Present the two solutions side by side in a compare/contrast table. Use no more than one page to describe the compare and contrast table. Provide all citations for your information. Again, these need to be authoritative resources and in APA format.

Table and description 20 pts
Side by side comparison: 12 pts
Description: 6 pts

7. Assessing Your Proposed Solution. The assignment is self-evident, though this version highlights the need to consider feasible, including cost effective, assessment. The claim, data, warrant template seems to work well, and it introduces the students to this style of argument.

7. Food Sustainability
Fall 2012
Final Project
Discuss in class 11/12. Due 11/15

Assessing Your Proposed Solution (35 points)

Part 1
As part of your project, you must describe how you could assess the impact of your proposed solution. What kinds of information would you gather, from whom, when, how and with whom would you share your findings? What strategies, mechanisms and personnel would you put in place to ensure an assessment that will help you achieve your goal and make corrections? Keep in mind that assessment costs money, and so you need to think carefully about the relationship between the scale of your assessment and the amount of information and intervention you can afford.

Put your assessment plan in the form of claim, data, warrant. The claim is basically the statement of the problem and your solution. The data that you seek becomes your assessment plan. The warrant is where you describe how the data you collect confirms (or not) the success of your plan TO SOLVE the problem in the claim. You need to be specific about how you are going to collect the data, and exactly what data you are collecting. The warrant must fully demonstrate that the data collected are appropriate.

Breakdown of Points:

Claim, data, warrant format: 5 points
Claim: Contains both problem and solution - 5 points
Data: Realistic and appropriate for problem and solution -15 points
Warrant: Fully explanatory of how data will support the claim -10 points
8. Promoting Your Proposed Solution. Students need to learn to promote their solutions and to do this they need to consider their audience(s). In Food Sustainability, an earlier assignment requested students to address food issues with multiple rationales that correspond to and appeal to various stakeholders—government officials, farmers, agribusiness, consumers. This assignment relies on that former effort to develop multiple approaches to persuade.

8. Food Sustainability
Fall 2012
Final Project
Due 11/29

Promoting Your Proposed Solution (45 points)

As another part of your project, your team needs to develop a plan for how to promote its solution(s). Every solution to a problem involves some kind of change. Think about who needs to change what. Who do you need to convince? Think about what audience or audiences you are trying to reach and what approaches might be best to reach them. You may want to review the reasons that motivate people to address hunger and from these motivations devise ways to get your point across.

For Thursday, 29 November identify your target audience(s). Provide 2 reasons (from our typology?) that might convince them to change their behavior or donate to your cause or do whatever it is you want them to do, and describe 1 or more ways to deliver your reasons (e.g. a commercial, a brochure, magazine articles, a video story, etc). We will review your preliminary ideas in class.

Once you have discussed your promotional plan, the team needs to execute! Work with the staff of the ATC and the technologies they support to produce your promotion. These promotions need to be ready for class presentation on 11/29, and polished to perfection for the grand exhibit that takes place on Monday, December 10.

Rubric
5 pts  Appropriate target audience
5 pts  Appropriate kind of promotion (don’t produce a pamphlet for an illiterate audience!)
15 pts  Visuals: Attractive, pertinent, attention-getting. 5 pts each
20 pts  Message: Pertinent, clear, persuasive, well-delivered (length, spelling/grammar, etc) 5 pts each

9. Putting It All Together. The 5-minute PowerPoint is one more rehearsal for the final poster presentation. It puts a premium on succinctness, timing, team work, and clarity. It also acquaints students with the idea that sometimes there is very little time in which to make an important statement on your own behalf. Students are accustomed to talking heads, to academic verbosity, to a style of delivery that does not work well in many other contexts. Show it, show it again, show it a third time fast, take questions, and get on with it.

9. Food Sustainability
Fall 2012
Final Project
Due 12/5

Putting It All Together (40 pts.)

Prepare a 5 minute PowerPoint presentation that contains the following information (in this order):

Problem Statement:
Solution:

Approach, Means, Mechanism:

Assessment Plan:

Benefits/Costs

The time limit on this presentation is 5 minutes. You should use the feedback you received from us and your classmates to decide what additional information you need to provide. Your presentation should be convincing – that the problem you have chosen is real, that the solution you propose is feasible AND solves the problem, and that the assessment plan will clearly provide data that are relevant documenting your solution.

In addition to making sure the content is strong, you need to be concerned with the presentation. Make sure that you are within the 5 minutes. Practice the talk to reduce the verbal stumbles and fillers. All members of the group must participate in your presentation.

Rubric:
Time: 5 pts
Content: 20 pts
  All elements present (10 pts)
  Statements supported with evidence (10 pts)
Presentation Quality: 15 pts
  Well-spoken (volume, ease, lack of ‘um’, ‘you know’ and ‘like’) 5 pts
  Slides must be word and picture perfect (10 pts)
Example of the First Year Problem Definition

Sola

1. Define the Problem

Current methods of evaluating educator quality in U.S. public secondary schools are lackluster and misused/misunderstood. More comprehensive and extensive evaluation techniques must be developed.


Teacher education programs need to recognize the role of teacher evaluation and incorporate it where appropriate. "...no states across the country have yet figured out how to use these data for instrumental or change-based purposes, to inform the betterment of schools, teacher quality, and most importantly students’ learning and achievement, and no states yet have plans to make these data useful."


Colorado's teacher evaluation policies lead to ineffective evaluations. "The research team identified four major barriers to an efficacious teacher evaluation system: an over-reaching state policy, negative incentives for teachers and administrators to commit to policy objectives; time constraints; and poorly designed evaluation processes."


This study looks into factors of experience and professional training in regards to teacher quality. It fails to find a relationship between formal professional training and teacher productivity. Continuous gains in productivity are found as teachers gain experience. This study may prove useful in developing evaluation criteria that relate to teacher experience (both in teaching and in other fields).

2. Impact of the Problem

Educator quality affects student achievement. Improving accountability through improved evaluation techniques leads to improving educator quality.


This looks into effects of evaluation on teacher performance. It can support the impact by determining that evaluation does indeed have an effect on teacher performance. If this weren’t supported then there wouldn’t be much of a point in trying to reform teacher evaluation.


Students in positive learning environments ("with sensitivity to adolescent needs and perspectives, use of diverse and engaging instructional learning formats, and a focus on analysis and problem solving")
are associated with higher levels of performance in end-of-year achievement tests. Teacher evaluations are important to ensure that teachers are creating such positive environments.


This study examines differences in effective and less effective teachers. This can help determine what kinds of changes must be made in designing new teacher evaluation methods that address the various aspects of “effectiveness”. Teacher effectiveness is an indirect impact of the problem because better evaluation methods may help to improve or remove ineffective teachers.

3. Cause of the Problem

Most evaluation methods fail to fully encompass all aspects of an educator’s quality.


Mixed effects are generated by certain evaluation methods. Further steps must be taken to take into account to create more flexible and valid measurements. “The paper provides new information about how states and districts are expanding their systems of measures for various purposes, and informs accountability policy by highlighting the benefits and limitations of current outcomes-based approaches to accountability and by clarifying the trade-offs and decisions that should be considered.”


Analyzes the differences that exist between value-added evaluation and ratings by principals. About a 3/4 overlap exists in these two methods’ ratings of teachers. Principals take experience into account. Such differences that exit between evaluation methods is an indicator that the methods are not comprehensive enough to fairly determine a teacher’s quality.


This is a study analyzing performance feedback, with the conclusion that performance feedback is an evidence-based practice with reliable results. If performance feedback does indeed influence a teacher’s quality, then finding proper techniques to give appropriate feedback should be taken into account when creating new evaluation methods.
4. Identify two or more deliverables (e.g. product, service, activity) that represent a realistic outcome for your
   
   i. Develop a novel method of educator evaluation that addresses issues with other contemporary methods
   ii. A compilation of existing evaluation methods that can be used together to fully evaluate an educator.
   iii. Determining the essential elements of what determines teacher quality
   iv. Deliver some form of improved educator evaluation method to local schools.

S1b. This is a near fine response to the assignment. Good sources, good citation format, good summaries. Well done. 30/30
Hi Dr. Traver,

For what I liked: I liked that throughout ID2050 we had specific writing milestones that we had to reach. It really helped direct our research and writing focus each week. Also, I was really happy with our final paper that we submitted at the end of IQP.

What I think could have been done differently: It would have been nice to have sit down meetings to go over our writing during ID2050 the way that we had them when we were in Paraguay, because I think those meetings really helped improve our paper. Also, it would have been helpful to have suggested completion dates or milestones throughout our time in Paraguay to help us write as we went along.

For example, I think something as simple as this would have been helpful: Week 3- draft table of contents, create outlines for new sections of paper, identify areas that need further information or need to change from previously written sections; Week 4- update sections that were identified at needing changes/additions during Week 3; Week 5- begin writing results and recommendations section; Week 6- finish results and recommendations, write executive summary and abstract; Week 7- proofread and polish paper, finalize bibliography and appendices.

Hope your summer is going well!
Sarah (6/20/16)

6/22/16
My feedback on IQP writing is below. Let me know if you have any further questions!

Best,
Andrew S.

ID 2050

1) The ‘rolling’ process of writing worked really well, as teams were able to work on smaller pieces of the proposal and get continuous feedback throughout the term. I feel that the advantage of this is that it is a more focused approach, going through one section at a time and writing it well, instead of thinking of the whole proposal. Students are able to keep writing, and with each section written and another added, the whole proposal is complete by the end of the term. This definitely was beneficial to students, both in the quality of the work as the paper has gone through several iterations already, and the work load and stress management as well.

2) As there are no ‘writing requirements’ at WPI, the level of writing across individuals varied. Hence, I think more time can be spent on actual writing skills, reading, and practicing on an individual level. This will ensure that everyone in the group has an opportunity to improve their writing skills, instead of always relying on the ‘good writers’. With that being said, writing across groups varied as well. I think discussions/workshops on effective group writing strategies will be beneficial, especially for groups that may lack ‘good writers’. Some groups choose to divide and conquer without reading each other’s work, some groups write together all the way through, some groups find a balance with their own system, taking turns editing, etc. This will be most beneficial for students that may have not experienced a big group writing project yet (GPS, Research Project).

I personally believe that WPI students should experience a big writing project early on, as I am a strong advocate for GPS and first year projects, and feel that it strongly supports the skills
needed for IQP writing and group work. ID 2050 has a lot to cover already (cultural knowledge and adjustments, the project questions).

1) The advisor being available to meet and give feedback on a regular basis worked really well, especially when going through the writing with the group.

2) I feel that groups should be responsible for their own writing schedule, however some groups struggle and leave everything until the end. It is important that students plan out what they will write and when, similar to ID 2050, so that they will not have to worry about a huge report at the end. I don’t think a writing plan should be required, as students should be held responsible, however the importance should be stressed. Again, I think focus should be on group writing techniques.
# Written Communication VALUE Rubric

Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and citing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

*Evaluation is discouraged to assign a zero to any work sample or collection of work that does not meet benchmark (full or last)/performance.*

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<thead>
<tr>
<th>Capstone 4</th>
<th>Milestones 2</th>
<th>Benchmark 1</th>
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<tbody>
<tr>
<td><strong>Context of and Purpose for Writing</strong>&lt;br&gt;Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).</td>
<td>Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.</td>
<td>Demonstrates awareness of context, audience, purpose, and to the assigned task(s) (e.g., the task aligns with audience, purpose, and context).</td>
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<td><strong>Content Development</strong></td>
<td>Demonstrates adequate consideration of context, audience, purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).</td>
<td>Demonstrates minimal attention to context, audience, purpose, and to the assigned task(s) (e.g., expectation of instructor or self as audience).</td>
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<td>Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.</td>
<td>Uses appropriate, relevant, and compelling content to explore ideas within the context of the disciplines and shape the whole work.</td>
<td>Uses appropriate and relevant content to develop and explore ideas through most of the work.</td>
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<td><strong>Genre and Disciplinary Conventions</strong>&lt;br&gt;Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).</td>
<td>Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices.</td>
<td>Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation.</td>
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<td><strong>Sources and Evidence</strong></td>
<td>Demonstrates consistent use of credible, relevant sources to support ideas that are appropriate for the disciplines and genre of the writing.</td>
<td>Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.</td>
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<td><strong>Control of Syntax and Mechanics</strong></td>
<td>Demonstrates a thorough understanding of high-quality, effective, relevant sources to support ideas that are appropriate for the discipline and genre of the writing.</td>
<td>Demonstrates an attempt to use sources to support ideas in the writing.</td>
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<tr>
<td>Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.</td>
<td>Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.</td>
<td>Uses language that generally conveys meaning to readers, although writing may include some errors.</td>
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<td>Uses language that sometimes impedes meaning because of errors in usage.</td>
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WRITTEN COMMUNICATION VALUE RUBRIC

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning in all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialogue and understanding of student success.

Definitions

Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through heuristic experiences across the curriculum.

Framing Language

This rubric is designed for use in a wide variety of educational institutions. The most clear finding to emerge from decades of research on writing assessment is that the best writing assessments are locally determined and sensitive to local context and mission. Users of this rubric should, in the end, consider local adaptations and additions that closely link the language of the rubric to individual campus contexts.

This rubric focuses assessment on how specific written work samples or collections of work respond to specific contexts. The central question guiding the rubric is “How well does written respond to the needs of audience and for the work?” In focusing on this question the rubric does not attend to other aspects of writing that are equally important: issues of writing process, written fluency with different modes of textual production or publication, or writer’s growing engagement with writing and disciplinarity through the process of writing.

Evaluators using this rubric must have information about the assignments and purposes for which the writing was written. Also recommended is including reflective work samples or collections of work that address such questions as What decisions did the writer make about audience, purpose, and genre as he or she composed the work in the portfolio? These decisions evident in the writing—in the context, organization and structure, reasoning, evidence, mechanical and surface conventions, and thematic connections used in the writing—will enable evaluators to have a clear sense of how writers understand the assignments and take it into consideration as they evaluate.

The first section of this rubric addresses the content and purpose for writing. A work sample or collections of work can convey the context and purpose for the writing itself by showcasing by including the writing assignments associated with work samples. Work samples may convey the content and purpose for their writing within the text. It is important for faculty and institutions to include directions for students about how they should represent their writing contexts and purposes.

Predominantly in the research on writing assessment that has guided our work, we have consulted the National Council of Teachers of English's Council of Writing Program Administrators' White Paper on Writing Assessment (2003; www.ncte.org/wpa/reports/positions/217981.html)

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Context Development: The ways in which the text engages and represents its topic in relation to its audience and purpose.
- Content and purpose for writing: The context of writing is the situation surrounding a text: who is engaged who is writing? Under what circumstances is the text to be shared or circulated? What social or political factors might affect how the text is composed or interpreted? The purpose for writing is the writer's intended effect on an audience. Writers might want to persuade or inform; they might want to report or summarise information; they might want to work through complexity or confusion; they might want to engage with others, or convert others with what they write; they might want to convey urgency or caution; they might write for themselves or for an assignment or to communicate.
- Disciplinary conventions: Formal and informal rules that constitute what is seen as a properly structured in different academic fields; e.g. introductory strategies, use of passive voice or first-person point of view; expectations for the thesis or hypothesis, expectations for the evidence and support that are appropriate to the task at hand, use of primary and secondary sources to provide evidence and support arguments and to document critical perspectives on the topic. Writers will incorporate sources according to disciplinary or genre conventions, according to the writer's purpose for the text. Through increasingly explicit or implicit use of sources, writers develop an ability to differentiate between their own ideas and the ideas of others, and build upon work already accomplished in the field or issues they are addressing, and provide meaningful examples to readers.
- Evidence: Source material that is used to extend, in persuasive ways, writer's ideas in a text.
- Genre conventions: Formal and informal rules for particular kinds of texts and/or media that guide formatting, organization, and stylistic choices, e.g. lab reports, academic papers, poetry, webpages, or personal essays.
- Sources: Texts (written, oral, behavioral, visual, or other) that writers draw on as they work for a variety of purposes—to extend, argue with, develop, define, or shape their ideas, for example.
Writing: Produce clear, effective, evidence-based writing

<table>
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<tr>
<th>Writing: Critical Thinking and Coherence</th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
<th>Unacceptable</th>
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<td>capitalization, or paragraph and</td>
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<td>sentence structure, and those errors</td>
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<td>make the reader's ability to</td>
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<td>understand the writing a significantly</td>
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<td>effortful process.</td>
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<td>Writing shows significant errors in</td>
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<td>spelling, grammar, syntax,</td>
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<td>punctuation, capitalization, or</td>
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<td>paragraph and sentence structure such</td>
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<td>that they impede the reader's</td>
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<td>ability to understand the writing.</td>
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**Writing:** Produce clear, effective, evidence-based writing

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
<th>Unacceptable</th>
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<tbody>
<tr>
<td><strong>Mechanics of</strong></td>
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<td>3</td>
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<tr>
<td><strong>Organization</strong></td>
<td>4</td>
<td>(Higher)</td>
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Purpose of the project is clearly stated. Paper is divided into appropriate sections, logically ordered, and has an opening and a closing that highlight the significance of the main points of the paper. The weight given to each section of the paper is appropriate. Paper does not include any unnecessary repetition of points or issues.

Purpose of the project is clearly stated, but the paper either is not divided into appropriate sections OR does not have an opening and a closing that effectively highlight the significance of the main points of the paper OR the weight given to each section of the paper is not appropriate OR the paper contains some unnecessary repetition of points or issues.

Purpose of the project is not clearly stated, and the paper either is not divided into appropriate sections OR does not have an opening and a closing that effectively highlight the significance of the main points of the paper OR the weight given to each section of the paper is not appropriate OR the paper contains some unnecessary repetition of points or issues.

Purpose of the project is not clearly stated, and the paper has multiple problems: may not be divided into appropriate sections and/or does not have an opening and a closing that effectively highlight the significance of the main points of the paper and/or the weight given to each section of the paper is not appropriate and/or the paper contains unnecessary repetition of points or issues.

| **Source Use**      |          |            |           |              |

Assertions are always supported by authoritative evidence. Citations are used to support the purpose and arguments of the paper and are used prudently and effectively. Direct quotations and paraphrasing are used appropriately and aid the reader's understanding.

Assertions are usually supported by authoritative evidence, but they are not always used prudently or effectively. When direct quotations and paraphrasing are used, they appropriately and aid the reader's understanding most of the time.

Assertions are sometimes supported by authoritative evidence, but they are not always used prudently or effectively. Direct quotations and paraphrasing are used, but they do not always aid the reader's understanding.

Assertions are not supported by authoritative evidence. Citations either are not used or do not effectively support the purpose and arguments of the paper OR they are not used prudently or effectively. Either direct quotations and paraphrasing are not used or, if they are used, they do not aid the reader's understanding.
**Writing:** Produce clear, effective, evidence-based writing

<table>
<thead>
<tr>
<th>Correspondence Between Sources Cited and Bibliography</th>
<th>Milestones</th>
<th>Benchmark</th>
<th>Unacceptable</th>
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</thead>
<tbody>
<tr>
<td>100% correspondence between sources cited in the text and sources included in bibliography</td>
<td>Less than 100% correspondence between sources cited in the text and sources included in bibliography</td>
<td>Significantly less than 100% correspondence between sources cited in the text and sources included in bibliography</td>
<td>Paper is missing bibliography AND there are no sources cited in the text OR bibliography is missing OR bibliography exists but sources are not cited in text</td>
</tr>
<tr>
<td>Formatting of Bibliography <em>if a consistent and decent system was used throughout the entire paper, consider that as being “in the correct format.”</em></td>
<td>Bibliography is in the correct format with no more than a few minor errors</td>
<td>Bibliography is in the correct format but there are either minor or some major errors</td>
<td>Either bibliography is not in the correct format OR it appears as if student attempted to put bibliography in the correct format but there are many errors</td>
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<td>Writing: Produce clear, effective, evidence-based writing</td>
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<td><strong>Capstone</strong></td>
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<td><strong>4</strong> (Higher)</td>
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<td><strong>Formatting of Citations in the Body of the Paper</strong></td>
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<td>If a consistent and decent system was used throughout the entire paper, consider that as being &quot;in the correct format.&quot;</td>
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<td>Citations are correctly formatted with no errors</td>
<td>Citations are generally correctly formatted with no more than a few minor errors</td>
<td>Citations contain either many minor errors OR some major errors</td>
<td>Either citations are not correctly formatted OR it appears as if student attempted to correctly format citations but there are many errors</td>
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<td><strong>Voice</strong></td>
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<td>The style used throughout the paper is consistent with regard to aspects of writing such as syntax, vocabulary use, tone, point of view, format, etc. The paper reads as if it was written by one individual.</td>
<td>The style used throughout the paper is mostly consistent with regard to aspects of writing such as syntax, vocabulary use, tone, point of view, format, etc. The paper reads as if it was written by one individual.</td>
<td>The style used throughout the paper is inconsistent with regard to aspects of writing such as syntax, vocabulary use, tone, point of view, format, etc. The paper reads as if it probably was written by more than one individual.</td>
<td>The style used throughout the paper is inconsistent with regard to aspects of writing such as syntax, vocabulary use, tone, point of view, format, etc. The paper reads as if different sections were written by different individuals and then cobbled together.</td>
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<td>Academic Honesty</td>
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<td>The reader provides evidence that demonstrates understanding and application of the content.</td>
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<td>The reader's argument is clear and coherent, with evidence presented logically and systematically.</td>
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<td>Writing: Overall Effectiveness of Communication</td>
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<td>Unacceptable</td>
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<td>Capstone</td>
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<tr>
<td>Produce clear, effective, evidence-based writing</td>
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</table>

Unacceptable: The reader's argument is unclear, with evidence presented incoherently and without logical structure.

Benchmark: The reader provides evidence that demonstrates understanding and application of the content, but the argument is not clear and coherent.

Milestones: The reader's argument is clear and coherent, with evidence presented logically and systematically.

Capstone: The reader's argument is clear and coherent, with evidence presented logically and systematically, demonstrating a deep understanding of the content.
WPI Project-Based Learning Institute (2016)

Summary—What Am I Thinking So Far?
WPI Project Based Learning Summer Institute (2016), Writing Workshop, Instructor’s Notes. Rob Traver Teaching Faculty, WPI

1. For reports, such as those that discuss projects in engineering and science, I prefer sentences that are succinct. My description of succinct can be found in Strunk and White.

2. In a related emphasis, I encourage students to keep sentences to less than 15 words. Most students (at least at my university) cannot manage sentences longer than 15 words.

3. I insist that students not use “which.” In nearly all student writing, a “which” phrase steers the sentence off topic and thereby weakens the thought.

4. I encourage a “funnel” strategy for reports and sections of reports. Funnels guide students away from beginning at too detailed or specific a level of information or from writing axiomatically as though they’re composing a textbook.

5. I teach students to write framing paragraphs for sections and framing sentences for paragraphs. The frame helps the students articulate the purpose and content of the section or paragraph. It helps them state, in general, what they’re going to talk about. It helps them avoid introductory paragraphs or sentences that go into far more detail than the reader is at first ready to absorb.

6. When writing a proposal, “will” is preferable to “would.” My example: which of these two marriage proposals is more effective: “Would you marry me? I would love you forever.” Or “Will you marry me? I will love you forever.” I rarely see “would’s” after this. 😊

7. Though it has taken me a while to learn, I find that feedback about many aspects of the paper does not yield as much improvement in writing as feedback about a few aspects of the paper. In other words, I have learned to pick my feedback battles.

8. More than the margin comments, the little statement I write at the end of the student writing influences students the most. In the first part of the statement I write what I like. I then write what needs to be fixed. When suggesting improvements, it helps to state a writing principle and then provide an example from the writing. For example, I might write that many sentences are too long and thus unclear or awkward. I will then take a student sentence from the text and rewrite it in a way that I think works better.

9. I make student writing public. I tell students that I will put examples of their writing up for review. As a class we will identify what we like and what we think will help. I typically ask students to choose a paragraph that they would like us to see, and, in that way, give students some control over what we review. The point here is that we write so that others can learn what we think; so we need to hear how others respond to our writing.

10. I have begun to specify, beforehand, how much time I will spend responding to a set of papers. That helps me prioritize my comments.