Feedback *Is* Teaching

Alverno College Faculty

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Feedback *Is* Teaching

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Introduction

This is a book about feedback as a process that supports learning — learning of students and learning of faculty. It is set in the context of Alverno College, a women's college in Milwaukee, Wisconsin, that has been a leader in ability-based education for more than 40 years. The accounts in this book are representative of the experience of many Alverno faculty members who daily use feedback to guide their students and adjust their teaching. To understand the power of feedback in learning, we begin with a look at one student in one class, working with a teacher whose focus is on the student's success as a learner. The student and the teacher, while fictional, represent a compilation of the experiences of Alverno students and faculty with assessment and feedback.

A Student's Perspective

Alicia is in her fourth semester, about midway through a degree in mathematics and history. She is currently taking an integrated communication seminar, which both fulfills a general education requirement and requires her to demonstrate the communication abilities that she needs for successful advanced-level work in her discipline areas.

As Alicia works in the Computer Center on her major presentation, she thinks about how far she has come since her early courses, especially through her interaction with faculty members about her work. "I'm a lot more confident about this project than I remember being in my first semester," she reflects. "Before Alverno, no one had ever looked so carefully at my work and then sat down and helped me understand what I had done — and not done." She smiles as she remembers missing a whole component of a major project because she hadn't read the assignment and its criteria carefully. "Now I really work to understand what's being asked of me, so I can give it my best shot."

The project she is working on asks her to prepare a report and present it to the class. It is a complex performance, requiring her to engage in library research on a topic related to a social issue she cares deeply about — immigration policy. The project demands that she read a range of sources, listen to interviews, view media presentations, and then put together a clear

argument that takes into account varied perspectives on the topic. As her instructor notes in the syllabus, the course is designed for students to

> take a more integrated approach because communication, as we practice it in our lives, is always an integration of multiple modes of receiving ideas, thinking them through, and expressing them. We seldom write anything, even a letter, without synthesizing things we've heard, read, seen, or discussed with others.

Alicia reflects on how difficult she found working with synthesis to be, at first. She could line up a set of articles and summarize them, one after the other, but putting them together to present a clear picture of the range of views was a challenge. In her feedback in previous courses, her instructors noted her difficulty, helping her to move forward by raising questions *(How do you see these three articles connecting?)* and suggesting next steps *(Think about creating a grid where you take notes on a set of articles and record themes that appear in more than one).*

Alicia also recalls that similar feedback on her writing and speaking has given her confidence that, when she has her thoughts lined up, she will be able to engage her audiences with the ideas. She remembers her very first speech, when she wanted to run out of the classroom but toughed it out. Her instructor's empathy and support went a long way to helping her learn from the feedback; the instructor guided her in looking at the criteria and seeing both what she did and what she needed to do next. She has found the same attention to criteria helpful across her general education coursework and in her first courses in her major. "Who knew," she chuckles, "that mathematics professors also care about clear communication with an audience?"

Some of the evidence for her argument for changes in immigration policy takes the form of statistics. She is grateful that her mathematics work in probability and statistics is helping her focus on what she wants the audience to understand. As the presentation and paper come together, she takes one more look at the criteria to test whether she is on track. "This is going to be cool," Alicia says.

A Teacher's Perspective

Francine is teaching the integrated communication seminar course for which Alicia is preparing her work on immigration. She began the work of the semester, several weeks ago, with a first assignment geared to give her a sense of the performance of each of the students in this semester's class. "I try to give students very detailed, individualized feedback on the first assignment for two reasons," she says.

> First, I want them to know I really take time to look at what they've done and provide support for their next steps toward meeting the expectations for performance in the course. And, second, I want to have a sense of what the strengths and needs are across the group, so I can plan learning activities that give them the most help. Sometimes that means I need to group students for some experiences so that their needs are met.

Francine reflects that this group, like others, had a range of needs to be addressed. "Another approach I take," she notes, "is to look at their electronic portfolios, to see their prior work and faculty feedback." That gives her additional information about issues that students may have been struggling with in the past.

Synthesis is a major focus in the reading, listening, writing, and speaking elements of the course, Francine notes. "I was happy to see that many of the students were using strategies they had learned in prior classes and that the strategies seemed to be working for most," she says. "So I've had students share with each other how they are using the strategies — making the most of the influence that one student can have on another. And then I can spend time helping them frame their presentations to make their synthesis accessible to the chosen audience."

Assessment's Role in Improving Outcomes

While our story focused on feedback, it is clear that there is a larger assessment framework in operation for Alicia, her classmates, and her teacher. It all starts with clarity about student learning outcomes for a course. At Alverno, that clarity involves connections to the eight

abilities that guide our curriculum — communication, analysis, problem solving, valuing in decision making, social interaction, developing a global perspective, effective citizenship, and aesthetic engagement — as well as to the outcomes for general education and/or for a major or support area program. For example, Alicia's mathematics major requires that she "independently and consistently adapt communication strategies to effectively convey complex mathematical concepts and processes," and her history minor calls for her to be able to "independently use theories and conceptual frameworks to organize, synthesize, and communicate her interpretations of historical phenomena." Alicia's teacher in the integrated communication seminar builds this general education course on a set of course outcomes:

1. Express and clarify your own ideas in relation to information and ideas of others
2. Articulate clear and effective relationships among ideas and concepts
3. Engage audiences by using appropriate conventions, developing appropriate context, and creating an effective style
4. Clarify how your choices as a communicator and the chosen elements in a communication experience contribute to your learning
5. Describe how your performance is an act of integrating communication abilities.

The teacher then envisions the outcomes as a set of performances that both support student development and demonstrate student achievement. As she builds learning experiences and assessments, the teacher structures performances that come closer and closer to what a demonstration of the outcomes would look like. And she creates self assessment prompts to help Alicia and her classmates make learning a more conscious process. When performances are completed, the teacher prepares feedback; in doing so, she models ways to talk about learning in relationship to criteria for a good performance. Looking carefully at performance in preparing feedback also provides the teacher with a picture of patterns of student growth — for individuals and groups — so that she can adjust plans to better support learning.

An Institutional Perspective

Alverno has been engaged in this kind of complex assessment-as-learning process for a long time, starting well before the current accountability movement. But now that U.S. higher education is feeling pressure to improve outcomes — whether conceptualized as grades, test scores, time to degree, or performance in professional roles — we believe that our experience has much to offer to the discussion, especially as an alternative approach to thinking about accountability for our students' learning.

In the current climate, the pressure for accountability often comes from *outside* the academy — from legislators, critics, employers, and so on. It's not surprising that such pressure is resisted by our colleagues in higher education. One of our arguments in this book is that feedback can be a powerful vehicle for improvement coming from *inside* the academy. Feedback, for example, functions in three ways to support improvement of outcomes. First, feedback improves student learning within a course because it not only provides students with clear expectations and information on how well their performance measures up to those expectations, but it also suggests strategies to address areas that need further development. Second, feedback improves teaching because the careful attention to performance required to give good feedback also deepens faculty members' awareness of student understanding or misconception, thinking and application, and expression of thinking in writing or speaking. Third, patterns of performance captured in feedback can assist a department or program to look across courses to uncover issues or problems and determine appropriate changes to improve programs.

While the Alverno assessment framework sets the stage for an institution-wide practice of the use of feedback to improve student learning, it is not a necessary condition for using feedback effectively. Individuals can incorporate feedback as a tool to improve student learning in a course, even if no one else in their department does so. Likewise, departments can undertake a process of using feedback across courses, even if their institution does not adopt the practice.

Of course, our experience at Alverno tells us that having colleagues working toward the same goals and using similar processes is a valuable support, because we can learn from others' successes, share questions, and get feedback on our own practice. Over the years, we have also developed colleagues at other institutions from whom we learn and with whom we share.

What to Expect from This Book

If you are a faculty member, this book may help you to see the value of feedback in helping students understand their performances in relationship to learning outcomes and to set goals for ongoing growth. If you are a faculty mentor, this book may help you to think about how to assist a new faculty member develop understanding about student learning and strategies to support learning. If you are an administrator, this book may suggest ways that feedback can help you to gain valuable information about the effectiveness of your program in supporting student learning. If you are a project officer at a foundation or a policy maker, this book may raise questions that can help you think in new ways about accountability for student learning.

The chapters in this book address varied aspects of feedback. They reflect not just the authors' experiences, but also draw upon a wider range of faculty and student reflection on practice and impact. We are grateful to our colleagues for their generosity in contributing their stories.

In the first chapter, education professor Nancy Athanasiou provides some of the basics about feedback, describing key elements of the feedback process and addressing forms and purposes of feedback. She provides samples of feedback from faculty and comments from students about what they find effective. Even if you are an old hand at feedback, you'll find some clear distinctions here that will be helpful in understanding how variations in approaches to feedback can serve varied needs.

In the second chapter, education professor Mary Diez lays out the key relationship between criteria and feedback. Central to her argument is that criteria help demystify expectations and provide a guide to students in

completing work and a guide to faculty in providing feedback. But finding the right criteria to guide students is a challenge, especially when faculty need to distinguish criteria from directions. And the form that criteria take needs to be linked to the purposes of feedback, which range from making a judgment to providing support for ongoing growth.

In the third chapter, history professor John Savagian addresses how faculty feedback changes over time. Experienced faculty share some of their observations about how learning to provide feedback in an outcomes-based curriculum changed their teaching. Along with some examples of feedback are reflections from less experienced faculty as they move from a more traditional education system to a developmental curriculum organized around abilities, public criteria, and individualized feedback.

In the fourth chapter, religious studies professor Daniel Leister provides some insights into changes in teaching theory and practice that instructors make in a feedback-driven curriculum. Leister discusses the foundations and limitations of traditional "input and testing" and offers a feedback-friendly alternative. He focuses on how instructors can give developmental feedback over time to help students progress toward clearly stated student-learning outcomes. He also addresses the limitations of the traditional graded curriculum and the advantages of replacing grades with feedback that establishes a "coaching" relationship with students.

In the fifth chapter, Diez and theater professor Richard Runkel probe how peer feedback helps students develop both capacity and collegiality. Peer feedback extends the benefits of feedback by giving students experience in looking at others' work. Diez and Runkel explore the benefits to students in being the feedback giver and the feedback receiver.

Finally, in the sixth chapter, the students speak; this chapter is an edited conversation about the impact of feedback from the student perspective. Throughout the text, we draw upon three other focus groups — two of faculty and one of students. We are grateful to all those who shared their experiences and their thinking about those experiences with us.

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Note: Throughout this monograph, we spell self assessment *without a hyphen whenever we refer to the process as we define and practice it. We do so to emphasize that* self *is not the object but the agent of assessment. We want the student to see that she is not literally assessing herself; she is assessing her performance in a specific context. This idea is also meant to assist the student to see that faculty are not assessing her person but a given performance of hers. In quoting other sources, we maintain the spelling of the word as it appears, with a hyphen.*

Chapter 1
Kinds of Feedback, Approaches to Feedback

Nancy Athanasiou

> [Feedback] is very useful, but there are two types of feedback: there is surface feedback and there is the feedback that really lets you know how you did on a paper. And that is the most important feedback. I'm here to learn and I'm here to grow, and I'm here to take what I have learned to the outside world. If you're just giving me the top level of feedback, which is, "Oh, you did great, you passed," then I'm not learning, I'm not growing, I'm not becoming a better person, and I'm not being used effectively in the world. So if it is great feedback — giving me my good, my bad, my ugly — that's great, because we all need it in order to become better women and better in the world.

The above statement by an Alverno student is an example of how feedback can positively impact learning. Beyond the letter grade, feedback lets a student know what she did well, so she can replicate the skill in future assignments, and what she needs to work on as she moves forward. Helping a student to see her development as connected not just to an assignment but to roles outside of the classroom is what makes effective feedback so powerful. As the student quoted above suggests, feedback, when done well, can have a lasting impact, improving performance both in and out of the classroom.

How do faculty know if feedback is effective or even what type of feedback to give? How much time and energy should faculty invest in feedback? How do faculty and students measure the value of feedback? These are common questions that faculty who are new to giving feedback often ask themselves when faced with what can seem like a daunting (not to mention time-consuming) task. To help answer these questions, one must first understand the varied purposes of feedback as well as the different forms that feedback can take. This chapter addresses these topics and provides examples to help

the reader better understand what effective feedback might look like in various situations. To begin, let's take a look at and define the various types of feedback and highlight situations in which you might use each type.

Formative Feedback

Just as there are various ways to assess for student understanding, there are also various ways to provide feedback related to that understanding. Feedback can be formative or summative, depending on when and how it is given to students. If, as Fluckiger, Vigil, Pasco, and Danielson say, "Formative assessment seeks to inform instruction and help students use the results to enhance their own learning" (2010, p. 136), then the purpose of formative feedback is to let the student know how she is doing — not in comparison to others but in relation to explicit criteria. Strengths and areas to develop are noted so that a student can replicate what worked while focusing on how to improve/develop specific skills. Formative feedback is best used in conjunction with self assessment that asks the student to identify where and how she met criteria. In this way, a feedback loop can be formed between the student and the instructor connected to the criteria for the given assignment. Once a student is used to receiving formative feedback, she can begin to identify strengths for herself. As one student noted:

> I've learned to use feedback as a conversation, the beginning of a conversation. I've written something, and then I get some kind of comment and I think about it, and if I want to I can go back to the instructor and talk about it or maybe write something back. So it's not a one-time thing; you can respond to it, instead of just taking it and not doing anything else. Also, from the feedback that I've gotten, I've learned how to give feedback to other people and to actually initiate exchanges.

For formative feedback to be most effective, it should be specific and descriptive in relation to the stated criteria. A student can then see how her work compares to the standards that were set and can begin to set goals for future assignments. Whereas a student may question a letter grade, formative feedback provides the answers to questions about quality, need for improvement, and next steps (see Figure 1).

Figure 1.
Sample of Formative Feedback from an Alverno English Course

> The best statement of your argument is in the first two sentences of the last paragraph on page two. Here you make a focused assertion of what Blake is doing (offering an alternative theory to conventional Christianity) and how he is doing it (using dualities and contraries). Once you've established a stronger focus, you could organize your paper in one of two ways: you could set up categories of dualities, or you could use "traditional Christian symbols" as subpoints, showing how Blake both uses and subverts them. If you choose the second route, you could discuss dualities within each section. Your analysis here is rigorous — you just need a stronger organizational pattern. When dealing with Blake's proverbs, be VERY careful in defining his terms. The words *Good* and *Evil* are very specific to his mythology.

The benefits of formative feedback extend to faculty as well. As you begin to recognize patterns in your feedback, you begin to take a closer look at criteria and at your own teaching strategies to determine if you could have been more helpful regarding a particular topic. It prompts faculty to go beyond an inclination to blame students — "Why didn't they follow directions?" — to a careful examination of criteria in order to be sure that what you *hoped* students would do with the material is actually what you *asked* them to do. Formative feedback, when done well, is a process that informs both the teaching and the learning that occurs in a given context.

Summative Feedback

Another type of feedback commonly given to students is summative feedback. Summative feedback is used to provide a final evaluative judgment on a particular performance, assessment, or course. Summative and formative assessments and feedback often have similar characteristics. According to Gallagher, "The distinction between formative and summative assessment hinged on the purposes for the use of data and the timing of that use" (2009, p. 84). Throughout the semester, faculty may give students formative feedback that helps them to identify strengths and areas in need of improvement in future class performances. Summative feedback may

then be given for an assessment at the end of a unit or course of study. For example, a biology student who is studying a unit on cell biology may submit lab reports throughout the unit and receive formative feedback focused on her understanding. At the end of the unit, she may take an assessment that covers all of the material. The feedback for this assessment may be summative and may constitute what translates into a grade or progress code for the unit. Not every assignment requires a "grade"; an assignment can be viewed simply as practice in understanding concepts. To keep students motivated, formative feedback allows the instructor to address areas that the student has mastered or is beginning to master as well as to point out areas that need additional development. There comes a time, however, when an instructor needs to judge what a student has learned overall, and then summative feedback is used to target those skills in relation to unit outcomes (see Figure 2).

Figure 2.
Sample of Summative Feedback from an Alverno Education Course

> What a pleasure it was to read your final reflection! You clearly articulated what you learned this semester and set clear goals for your teaching as you move into the final stages of your preparation program. Your reflective nature serves you well and allows you to plan for meaningful modifications and adaptations that impact student learning. You seek out and are attentive to feedback that will help you develop. You know what you do well and want to know ways you can better yourself — that says so much about the type of teacher you are as well as the teacher you want to become. Your enthusiasm for your content and for your students is contagious! Knowing that you need to slow down in your excitement is a very appropriate goal, as you want to be sure that the students are not just excited but understand the concepts as well. You can articulate the interconnectedness of the teaching standards and the advanced outcomes of the major [Alverno education abilities]. Your strength in this area not only impacts your teaching but will also help you to develop a portfolio that clearly connects the standards and abilities to your teaching (and learning). In your next field [placement], you will have even more opportunities to teach, and the focus of the seminar will be on assessment. You are well prepared for this fourth and final field experience in anticipation of student teaching. I wish you the very best as you move forward — it was a pleasure working with you this semester!

Qualities of Effective Feedback

Regardless of the type of feedback given, it is important to remember that effective feedback is *descriptive,* highlighting specific examples of what worked or what needs to be developed; *evaluative,* giving the student a sense of where she is in relation to explicit criteria or outcomes; and *motivational,* giving the student enough information to allow her to move forward with a clear understanding of her skills and abilities as well as an understanding of how to continue to develop them.

The idea of motivation resonates with students. When asked how feedback motivated her as a learner, one student responded, "When it's specific, it tells you exactly what to work on and that's most helpful. Instead of getting a grade, you know exactly what to do *to improve*." Another student added, "It helps you develop as a person and makes you want to do better on your next assignment." For feedback to have that type of impact, it must include specific evidence of how/why criteria were met, or not. A letter or mark does not have the same impact; it does not invite conversation or offer assistance regarding next steps. It may indicate that criteria were met, but without specific evidence regarding the how/why, a student can only hope for the best in future assignments.

Purpose of Feedback: Diagnosis

Feedback can come in a variety of forms and can be used for multiple purposes. Feedback may be given to provide diagnostic information so that the student is aware of her performance on a given task and can make improvements as needed. Diagnostic feedback may also be used to show the student the acceptable level of performance for the assessment. For example, an instructor might access reporting features in a learning management system to discern patterns in attendance, participation, deadline management, or assessment performance, and then use that data to formulate feedback for students.

Purpose of Feedback: Warning

Feedback might also serve as a warning for students whose work does not meet stated criteria. In these instances, the feedback needs to identify,

specifically, what is missing in the performance. For the purposes of student learning, it is important that the feedback identify what the student needs to do to improve the performance, but the feedback must not allow the student to simply "correct" identified errors and resubmit. Particular errors can be highlighted as examples of what to improve, but the student should be encouraged to identify and correct remaining errors. Feedback that serves as a warning needs to be clearly connected to stated criteria and needs to include consequences for not meeting the criteria upon revision (if applicable) or in future assignments. Feedback that is used to warn a student about her performance is often combined with additional assistance from faculty and/or a referral to outside services (e.g., communication labs, tutors) so that support is made available and the student knows how to proceed toward meeting criteria.

Purpose of Feedback: Motivation

Feedback can also be used to motivate students and encourage the use of particular skills and strategies. In these cases, educators highlight particular strengths of an assignment or assessment so that the student can easily recognize what worked and why. This allows the student to replicate those skills in future performances. Feedback that motivates must be more than a statement like "Great job!" and it must be more than a grade; it must accurately describe how and why students met stated criteria. While many students look to a grade alone as an indicator of success, a grade does not provide the necessary information for how to achieve success in future performances. For feedback to motivate, it needs to be individualized, specific, and given in a timely manner (see Figure 3).

Figure 3.
Sample of Feedback Used to Motivate from an Alverno Education Course

> At this point in your program, you have demonstrated a solid understanding of the Wisconsin Teacher Standards as well as the advanced outcomes of the major. You can connect your experiences in the classroom to relevant educational theories as well as to an understanding of adolescent development. You work to meet the needs of ALL learners — your job as a paraprofessional has served you well and will continue to do so as you work to complete your program. Excellent job!

Purpose of Feedback: Identification of Problems

Giving difficult feedback may be an educator's least favorite task, but like all effective feedback strategies, it is one that is necessary to improve the teaching/learning process. If a student misses the mark on a particular assessment, it may be because she does not understand the material at an acceptable level. In such cases, the student needs to be made aware of the criteria that have not been met and given direction on how to proceed (e.g., revise the work, retake the assessment). If a student is not able to demonstrate proficiency in an assessment task or to meet course outcomes, it may be necessary to issue feedback that indicates that the student will not be able to successfully complete the course. This feedback should be linked to the student's individual needs and situation. If the issue is one of readiness to move forward, the feedback should indicate what the student needs to work on next time around. If the student has been given multiple opportunities but does not possess the skills and/or abilities to meet course outcomes, feedback from throughout the course needs to be compiled and shared with the student and direction provided for next steps (e.g., meeting with academic advisor, career counseling).

Sharing Your Feedback

Just as there are multiple purposes for providing feedback, there are multiple formats that can be used to share an intended message. These include oral, narrative, individual, small group, class, peer, and interactive (back-and-forth dialogue). Whatever the format, instructors may use educational technology as well as traditional pedagogies to share feedback with students. The type of feedback depends on the assessment task, timing issues, type of performance (group versus individual), and need for documentation. And depending on the type of performance, more than one type of feedback may be provided. For example, if a student gives a speech in class, the instructor may choose to take notes throughout, provide oral feedback at the end, and then type up her notes or create an audio or video file so that the student can review feedback and have a record to refer to when preparing future presentations. Oral feedback can stand on its own; however, if the student must rely on memory alone, she may not be able to focus on all aspects of her performance. In this case, using video recording technology and saving audio files within a digital portfolio may be especially helpful to students.

Feedback for Groups

Depending on the assessment design, individual feedback can be used for both individual and group performances. In either case, the assessment requires feedback that focuses the student's attention on strengths and areas in need of further development. To get at individual contributions in a group assessment, a self assessment prompt that is connected to assessment criteria, that asks for evidence, and that allows the student to describe her contributions helps faculty to differentiate the various contributions of each group member.

Feedback can also be given to groups of students, with the same intent of helping them to identify strengths and areas in need of improvement. In these situations, feedback is still connected to criteria, but the focus is on how best to help the students move forward *as a group* rather than individually. Group feedback can reduce the amount of time needed to give quality feedback while still honoring the efforts of students to meet assignment criteria.

There are times when it is helpful to provide feedback to the class as a whole. In these instances, the instructor generally identifies common strengths and areas in need of development and highlights them with the entire class. To enhance this type of feedback, the instructor should consider providing specific examples of what worked and have the students help to identify why. The same strategy works well for areas in need of improvement. Providing an example and asking students to point out what could be improved gives everyone an idea of the level of proficiency that is expected. It also points to the need for specific evidence to support a given judgment. Students understand the benefit of evidence as they work to meet criteria and to self assess, and they expect the same from their instructors. When students were asked how they use evidence to self assess, one student responded:

> I think it's very helpful that when you've said you met criteria, you have to give evidence. You have to say, "How did I meet [criteria]"? It requires digging deeper, knowing what you wrote. . . . It definitely helps to have to give evidence.

This quotation highlights the importance of providing specific evidence to determine if criteria were met. When you work with an entire class on a given work sample, you help students understand how to use criteria as the framework for a given assignment as well as helping them see how feedback, done well, connects to the same frame. A letter grade, check mark, or short phrases such as "Well done" or "Meets criteria" do not provide the necessary information for students to replicate what they did well or to make corrections.

Giving Written Feedback

One of the most common forms of feedback is narrative feedback. Some faculty choose to handwrite their comments on student papers, projects, or presentations; others choose to word process their comments at the end of a paper or embed them throughout, or use collaborative software; still others do all of this within a learning management system environment. Regardless of format, narrative feedback can often read like a conversation, a strategy that many students both enjoy and appreciate. It is important to remember, however, that not every student is prepared to receive feedback, particularly for the first time. Taking the time to set context for the type of feedback given and the reasons for giving it can help students better understand what is often an unfamiliar process. Consider one student's initial experience with feedback:

> I was mortified when I got my first feedback. I was crying and I didn't want to write anymore. It wasn't at all due to the instructor; it was me personally. I think it was that I couldn't take constructive criticism very well, so I didn't handle it as I should have. Now it's completely different. Now I need that feedback — not surface feedback. Surface feedback is when they say, "Oh, you did good," but they don't explain why or what you need to work on — because there's always something to work on.

The idea of feedback as a conversation may seem unfamiliar to some educators, but if you view feedback as a way to encourage student learning, not just in a given assignment but as a lifelong practice, then you are more likely to provide students with information that helps them to broaden

their perspectives about a given topic. For example, you could suggest other readings that would support a student's stance, you could provide an alternative view, or you could point out an idea of hers that you had not considered before. In this way, you are helping students to move forward and to build on their existing knowledge base.

Peer Feedback

Instructors are not the only ones who can help students determine what works and what needs to be improved; students can help one another as well. But like all strategies, peer feedback needs to be modeled and taught before being implemented in class. First-year students who are not familiar with feedback may not be comfortable or ready to provide feedback to others. Similarly, a faculty member who is unfamiliar with providing quality feedback would not want to ask students to take on a role that she herself is unfamiliar or uncomfortable with. (See chapter 5 for a discussion of peer feedback.)

Location, Location, Location

We now look at where and how feedback is delivered. The location of feedback depends on several factors, including type of assignment/assessment, technology used, and size of the class, to name just a few. Feedback can be handwritten, word processed, audio recorded, or shared via digital video. It can be written on the assignment itself, embedded within the document, recorded, entered on a feedback template, emailed, uploaded, or handed back. There are potential benefits and drawbacks to each of these methods, and personal preference is often the deciding factor. Students have their own opinions about what works best and why, and their views are also shared.

Handwritten Feedback

When technology tools were less common, faculty often gave students handwritten feedback on assignments and assessments. Comments were written in the margins of the paper so that they connected, visually, to a particular section of the student's work. A summative statement that addressed criteria might be included at the end of the paper. If revisions

were needed, the student might be asked to submit the original draft along with the revised copy so that there was a record of her first attempt along with the original feedback. Faculty liken the process to having a conversation with the student that both supports her efforts while helping her to think about ways to improve. Is writing feedback time-consuming? Yes, but the benefits are well worth the effort. Students tend to agree: "You can see feedback as an acknowledgment of the work that you've done, or as encouragement and reinforcement of things you've done. Sometimes it's a challenge to do more, sometimes it narrates progress you've made."

For very practical reasons, written feedback does not work for everyone. What if your handwriting is difficult to read? Time spent writing comments can be doubled by having to explain the comments to the student because she cannot read your writing. That becomes frustrating for faculty and students alike. According to one student, "I think one time I actually did make an appointment with an instructor and brought the paper with me and asked, 'Can you tell me what this says?'" Does poor penmanship preclude faculty from giving feedback? Not at all; there are other options to consider.

Electronic Feedback

With the use of communication technology and course management software becoming the norm, students are increasingly asked to upload their assignments. Now, rather than having to wait until the next class session, faculty have access to student work as soon as it is submitted electronically. Once an assignment is uploaded, faculty have several choices: print all of the assignments and give handwritten feedback, open the files and provide electronic feedback within the document, or use other communication technologies to record audio or video feedback in response to student work. Choosing to save trees, many faculty word process their feedback. In order to maintain the same kind of "conversation," they type comments in a different color within the paper, or use the software's review features as a way to make the same connections to particular points that the student made (or did not make). Many faculty continue to include summative feedback focused on criteria at the end of the assignment. An added benefit of using technology to provide feedback is that the response to the student can be almost immediate; it does not have to wait until the next class.

As noted above, for feedback to be effective, it needs to be timely, and technology helps to achieve that goal.

The Spoken Word

Oral feedback is another option and can include more than comments made by the instructor in class. Face-to-face comments can be helpful, but their impact may not be long-lasting, as students may soon forget what was said. If handwritten or word-processed feedback is difficult to give, faculty can consider using an audio recorder. Digital audio recorders allow faculty to "speak their mind" and then either send the file electronically to the student or upload it to course management software or digital portfolios. Computers, websites, tablets, and mobile devices increasingly offer applications to easily support this form of spoken-word feedback. Oral feedback may not be as common as written feedback, but it serves the same purpose and may suit your style and/or that of your students.

Templates

Creating and using a feedback template is another great way to let students know how they are doing in relation to explicit criteria. Templates often list each of the criteria with space alongside for comments. Figure 4 is an example of a template used by Alverno education faculty to provide feedback to students (the "candidate") on their student teaching performance:

Figure 4.
Sample Feedback Template: Observation of Student Teaching

Planning and Preparation	Evidence (Candidate)
• Demonstrates knowledge of content and pedagogy • Chooses and creates learning experiences based on appropriate objectives • Selects services or resources, e.g., media, technology, materials, to reinforce instruction	

Classroom Environment	**Evidence (Candidate and Student)**
• Reinforces a learning community in which individual differences are respected and in which students work collaboratively and independently • Plans for and delivers motivational instruction by relating lessons to students' interest, providing student choice, questioning, and investigation • Organizes, allocates, and manages resources of time, space, activities, and attention to engage students productively • Maximizes the amount of class time spent in learning by creating expectations and procedures for communication and behavior	
Instruction	**Evidence (Candidate and Student)**
• Models and supports active listening, interactive discussion, and thoughtful responses in reading, writing, and other media • Uses different types of explanation, levels of questioning, and discussion techniques to challenge and support student thinking • Actively engages students in meaningful learning • Adjusts instruction to meet student needs and styles in order to enhance learning • Varies her/his role in the instructional process in relation to the content and purposes of instruction *(cont'd.)*	

Instruction, *cont'd.*	**Evidence (Candidate and Student)**
• Communicates with sensitivity to cultural and gender differences	
Assessment	**Evidence (Candidate and Student)**
• Uses appropriate formal and informal assessment strategies that are linked to lesson objectives • Monitors the impact of teaching on student learning, modifying plans and instruction accordingly	
Professional Responsibilities	**Evidence (Candidate)**
• Relates professionally and effectively with the cooperating teacher and faculty • Dresses professionally and consistently portrays a professional demeanor • Reflects on own performance in relation to Alverno Education Abilities and WI Teacher Standards	
Summary Statement and Areas to Concentrate on Improving:	

If developmental levels are established, those too can be included, and faculty can place feedback in the appropriate column (see "Single-Point Analytic Rubrics," in chapter 2). Figure 5 is a sample template of what a single-point rubric might look like.

Figure 5.
Sample Single-Point Rubric

Does Not Meet Criteria	Criteria	Exceeds Criteria
	Phase I: • Described context setting according to designated criteria • Described how data influenced lesson design	
	Phase II: • Developed lesson plan(s) according to course model and needs of students • Described rationale for plan(s) according to objectives, assessments, and procedures	
	Phase III: • Described placement context • Summarized lesson(s) • Described assessment procedures • Described analysis of the class performance related to lesson objectives • Presented work samples in meaningful context *(cont'd.)*	

Does Not Meet Criteria	Criteria, *cont'd.*	Exceeds Criteria
	• Presented well-reasoned implications for future instruction • Gave personal reflections in relation to the Alverno educator abilities • Used level 4 writing throughout all three phases	

Regardless of the type of template used, a template helps to focus feedback and, in the case of a developmental template, provides a visual that lets the student know where she stands in relation to each of the criteria. Faculty using oral feedback, perhaps incorporating video or audio recordings, can also reiterate and direct student attention to criteria as part of the process.

As this chapter illustrates, feedback comes in many forms and can be used for a variety of purposes. The most effective feedback highlights what a student has done well while helping her to move forward. Feedback is not meant to compare students to one another; rather, it is meant to help students gauge where they are, at that moment, in relation to explicit criteria. To accomplish that task, feedback needs to be *descriptive, evaluative,* and *motivational*. Vague comments like "Good job" or "Met criteria" do not give the student any indication of how she achieved those goals and serve no more purpose than a check mark or a letter grade stamped on the front of an assignment. Take the time necessary to give good feedback and you will see students grow and develop both in and out of the classroom.

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Chapter 2
The Central Role of Criteria in Giving Good Feedback

Mary E. Diez

Both Chappuis for K-12 (2005) and Sadler for higher education (1989) describe feedback as critical to a learner's understanding of learning goals, pointing to criteria as taking a central role in the process. Sadler argues that the learner needs to have a goal, outcome, or standard to aim at (what Chappuis calls "Where am I going?"), a comparison of the actual performance with the standard ("Where am I now?"), and the opportunity to take action to come closer to the goal ("How can I close the gap?"). These simple questions capture the important relationship of criteria to both feedback and learning.

Where Am I Going?

How are learners to understand the meaning of the standard, goal, or outcome? Criteria, as conceptualized by the Alverno College faculty (1994), are indicators of the meaning of a learning outcome, providing detailed descriptions of the integrated knowledge and ability expected in a quality performance. Criteria serve both the learner and the teacher/assessor in that they are clear enough for the learner to imagine a successful performance and sufficient to enable the assessor to judge the presence of knowledge and ability. To function in the two ways described, criteria need to be both qualitative (to capture the kind of performance aimed at) and observable (to provide evidence for the judgment). For example, if a chemistry performance assessment calls for the student to write a grant proposal for a piece of spectroscopic equipment appropriate for her setting, then criteria that are both qualitative and observable would be that the student:

- Makes a persuasive argument for the need for the equipment and its applicability to her work
- Provides valid scientific information that is relevant to the situation and for her audience
- Structures the proposal logically
- Writes clearly, incorporating diagrams and tables as appropriate.

When teachers first try to create criteria to guide learners, they often start by identifying *all* of the things that they want to see in a performance, without regard to an important distinction — the difference between directions and criteria. Directions can be important, but they are often *quantitative,* providing a set of limits not necessarily related to the *quality* of a performance. For example, a teacher might want to give a range of pages for a piece of writing, or a "ballpark" estimate of the number of sources that a learner might include in a paper. But there is a difference between *directions* as guides to the learner's planning and *criteria* that illuminate the end product or performance that the learner is shooting for. Think, for example, of the history teacher who gives only directions. She asks students to provide five sources of data in a paper in which they are to argue for a generalization about a period in history — for example, key causes of the Civil War. What is the teacher to do when Student A provides five mediocre sources and does not make a clear case for her generalization, and Student B provides four excellent sources and argues quite effectively for hers? With a ballpark direction ("three to five pieces of data") and qualitative criteria (e.g., "effectively synthesize from multiple sources," "make a compelling case for your position"), the learner can be clear about the goal and not get stuck in simply counting sources without regard to how good they are or how she used them. Because criteria need to guide students toward a good performance without limiting them to a narrow vision of the performance, they cannot be reduced to a formula.

After a little experience with developing criteria, some faculty have found it useful to separate out the directions, especially for beginning students, perhaps putting them in a separate section of the materials laying out the assessment instrument. In addition, some faculty have found it helpful to give a range for any numbers in the directions (e.g., "four to six sources,"

"five to seven pages") to help prevent learners from fixating on the quantitative.

One helpful reminder to faculty to think qualitatively as they develop criteria is to ask whether a statement conveys more than just "You must do X," where X is something that could be judged as either present or absent, without variation in between. For example, when you say, "You must center your major headers for the research report," the judgment can be absolute — they are either centered or not. Because criteria are less absolute and invite learner reflection on how they contribute to a quality performance, it is helpful to use a qualitative aspect — *clearly, fully, thoughtfully, effectively* — or to capture the qualitative in phrases — *make a compelling case, provide credible evidence to support the feasibility of a recommendation.* If the distinction is not yet clear, try taking the short quiz in Figure 1. Mark D for direction (can be judged as present/absent) and C for criterion (allows for a qualitative range of performance) for each of the statements below. (Answers appear on p. 47.)

Figure 1.
Quiz on Directions versus Criteria

a.	Throughout the writing, clearly shows how others' ideas relate to his/her own thinking	
b.	Provides citations from original sources using APA style	
c.	Incorporates at least three examples	
d.	Uses examples to effectively support an idea and create a picture for the reader	
e.	Uses at least two computer applications from the list provided in the presentation of the project	
f.	Effectively uses technology to assist the audience to understand the findings of his/her project	

In the three marked D for directions, note that none highlights the larger purpose; in following them, learners simply comply with a requirement. In contrast, the three marked C give learners a sense of what the goals are — to make clear connections, to provide support for an idea, and to help an audience understand a message. In using these criteria for guidance, learners can picture where they are going with the product and for what end.

Is there a "right" set of criteria for a given performance? When teachers try to create criteria to guide learners, they also have to grapple with this key question. In our work as Alverno faculty, we usually describe the process of developing criteria as "breaking open the outcomes," trying to capture a number of aspects that are inherent in an outcome or are critically necessary for a successful performance of that outcome. For example, in a beginning course in history, one outcome identified by history professor John Savagian is: "Make relationships between and among observations and inferences about human behavior and social context through a critical analysis of secondary sources."

Savagian describes breaking open this outcome as a process of thinking about what it would take for a student, relatively early in her college career, to begin to think like a historian in relationship to the Revolutionary War. A student whose prior experience of history courses in high school focused on memorizing facts would be challenged by the outcome's fairly sophisticated expectation — that she work with secondary sources, record the explicit data, probe it for implicit meaning, and make connections related to a larger frame of human behavior and social context in a particular historical period. The movement from prior experience to this outcome is quite a leap, and Savagian recognizes how a series of learning experiences and progressively demanding assessments are needed to scaffold student development toward the outcome.

Addressing the design of learning experiences and early assessments, he lists components that build to the outcome:

> I want students to recognize multiple points of view or perspectives on the revolution. So I have them read a number of scholarly articles and describe what they see from the viewpoint of those addressed, e.g., the working class, the elite of society, men and women, persons with different political positions, etc.

He describes the process of first looking carefully at what the articles say and then moving into connection making in two ways: *What patterns and themes are evident in how people responded to the conditions they experienced and the options they saw? Whose experience is missing in the accounts — and why might*

that be the case? What does the absence of the experiences of some groups suggest about the social context of the time?

In order to pull together their initial analysis, Savagian has students watch *Mary Silliman's War,* a film based on a historical event that took place in a small coastal town in Connecticut during the early years of the American Revolution. While not a documentary, the film creatively expresses an interpretation of historical events and depicts some of the issues that students encounter in their readings on revolutionary perspectives. As documented in Figure 2, he provides a contextual frame, a set of directions for an assessment based on the film, and key criteria that capture the qualitative elements related to the outcome he identified for the course. Note as well how Savagian separates the directions from the criteria in this example; the directions are part of the statement of the task.

Savagian uses questions to engage the students with the criteria, but the criteria can also be expressed as descriptions of a good product and/or process. Criteria 1, 2, and 3 address both the outcome targeted in our discussion above and a second outcome that helps to move the students' connection making deeper as they work to "articulate and empathize with diverse historical perspectives and learn to interpret an issue, event, or development in history from at least two different, historically conditioned worldviews." Both outcomes, however, require the critical components of identifying observations, drawing inferences, and making relationships that shed light on human behavior and social context in a particular historical period.

One might ask: Is this the "right" set of criteria? These criteria are certainly not the only possible criteria. But Savagian, in refining the criteria over several semesters, finds that they give students appropriate guidelines and allow the instructor to address most of the issues that typically emerge. He agrees, however, that they are not the only possible criteria, since other formulations of the criteria might also capture key aspects of the outcomes. Other instructors have noted that creating criteria that allow for a *range* of performance makes it possible for students to approach assignments and assessments in their own unique way and can encourage creativity in the performance.

Figure 2.
Example of an Assessment in History

A Historical Evaluation of *Mary Silliman's War*

Course outcomes that relate to this assessment:

1. Make relationships between and among observations and inferences about human behavior and social context through a critical analysis of secondary sources.
2. Articulate and empathize with diverse historical perspectives and learn to interpret an issue, event, or development in history from at least two different, historically conditioned worldviews.
3. Demonstrate the ability to use integrated communications to articulate a clear and effective relationship among historical events and ideas, express and clarify a position, and engage the audience using appropriate conventions and effective style.

Background: The film *Mary Silliman's War* is based on a historical event that took place in a small coastal town near New Haven, Connecticut, during the early years of the American Revolution. The film depicts some of the issues we've examined through our readings on revolutionary perspectives and through our readings in our textbook, *America's History*. *Mary Silliman's War* is not a documentary but rather an imaginative film that creatively expresses the interpretation of the filmmakers. Although based on true events surrounding the Tories' capture of Mary Silliman's husband, this film also portrays some significant characteristics and conflicts confronting British Americans as they fought a war against both England and each other.

Your Task: You are a member of a high school American Studies curriculum committee that is considering using *Mary Silliman's War* as a way of introducing high school seniors to some of the significant characteristics of life and society in Revolutionary America. The committee is particularly interested in determining whether and how the film portrays the theme of "multiple revolutions" around which the high school course is organized. The course is designed to explore various factors, such as class, status, race, and gender, that influenced a person's decision to fight (or not) for independence.

As the history teacher on the committee, your task is to write a report to the other committee members that makes a recommendation on the film based on its historical validity related to the course theme. The committee also wants to know of any other perspective(s) the film lacks that you believe must be addressed in such a course.

In your memo to members of the curriculum committee, **all of whom have seen the film,** you need to do the following:

a) focus on an important figure in the film and describe how his or her individual actions in the war reflect the course theme;

b) draw on your class readings, using specific examples, to show whether the theme as explored in the film is historically accurate (cite your sources in your paper);

c) give voice to a perspective of the revolution that is missing from this film and justify why it should be explored in the course;

d) make a recommendation regarding the use of the film to introduce high school seniors to characteristics of Revolutionary America.

Your memo should be no longer than four to five typed, double-spaced pages (12 point). It should not follow the order of tasks listed above. No cover page or binders. Just staple it.

CRITERIA

Rely on the following criteria as a way to organize your ideas, and as a checklist to make certain you have fulfilled the task:

1. Have you analyzed and explained, using reasonable examples, how the film develops the theme about Revolutionary America described above?

2. Have you clearly shown connections between the conflicts or characteristics of American society that you analyzed and your understanding of Revolutionary America as developed from historical sources?

3. Have you described and justified why an important perspective, missing from the film, should be included in the course?

4. Have you made a rational recommendation on the film — based on your knowledge of the period and analysis of aspects of the film — that fulfills the course theme?

5. Is your paper free from grammatical and typographical errors? Is it well organized? Does it contain an introduction, body, and conclusion? Does it speak to the specified audience?

Sadler (1989) argues that there are hundreds of possible criteria available to the faculty member working with this kind of assessment of an outcome. He says that the faculty member selects a set of criteria that seems to do the job, based upon her experience in the past. She may remember that prior students had difficulty in making connections between sources that addressed varied perspectives and the theme of multiple revolutions, so she highlights the expectation that students will make those connections clear. But there are many more criteria that might be relevant and that are not included in the set the faculty member gives to students.

One way to think about this problem, using Sadler's terminology, is that criteria are both manifest and latent — that is, both explicit and assumed. Making them manifest is a way to get expectations out of the teacher's head and into written form, where they can guide the student. But given the range of possible criteria (hundreds and hundreds of potential statements), it is probably good advice that teachers limit the set that they give students to the criteria most crucial for the specific assignment and for the developmental level of the learners. The other, latent criteria can be drawn out as needed. The late English professor Georgine Loacker, influenced by her interaction with Sadler's thinking, often said to her students as they discussed criteria for an assessment, "This is my *current* thinking about what the criteria need to be for this assessment." A statement like hers leaves the door open for the clarification or expansion of the criteria in her feedback, and also allows an opportunity for students to comment on the usefulness of the criteria for their work.

Sadler also argues that over varied developmental progressions, and depending upon the needs of the student, criteria can move from latent to manifest and back to latent again. Sadler argues that once a criterion is mastered and has become second nature, the faculty member does not need to make it explicit; it can go back to being latent. When faculty at Alverno talk about developmental differences between beginning and advanced students, they point to discrete criteria that can be critical in early courses but that are taken for granted in later courses. Thus, in a later history course for majors, the criteria for an assessment might assume that students will fairly automatically explain and give examples from primary and secondary sources when they engage in analysis. And so the criteria for later courses

may focus on the quality of the interpretation or critique in a historical argument. However, if students fail to demonstrate the implicit expectation (to use Sadler's term), the instructor may need to make that expectation explicit again in feedback.

How do we encourage a focus on quality work? Often when students have some experience with using criteria, they interact with faculty about the meaning of the criteria. Faculty can use such interaction as a springboard for discussion that pushes student understanding of the learning outcomes and their own performances deeper. Their experience supports Rust's (2007) call for student participation in a dialogue or conversation about what constitutes good work. He suggests that engagement with and development of criteria is necessary for self-regulation of one's own work. Sadler (1989) engages a similar argument when he says that criteria can be a vehicle for conversation about what constitutes quality. Stiggins and Chappuis (2005) make the point that student-engaged and -involved assessment requires ownership of the process on the part of learners.

Making the transition to a focus on quality work requires conscious attention, especially because beginning students often see criteria as the domain of the professor and feedback as a one-way process of faculty judgment. Gradually, through discussion about outcomes (the "Where am I going?" question) and practice in engaging with criteria and relating them to performances, faculty bring students more and more into the discussion.

One strategy described by Berger (2003) is particularly useful. He describes a faculty member making three samples of work on a performance assessment available for class critique, prior to the students working on the assessment. One sample is clearly below expectations, one solidly meets them, and another exceeds them. The instructor guides the discussion, focusing on what the students see in each sample: *What distinguishes one from the other? What qualities emerge in the critique? How do they link to the criteria?* Berger reports that in classrooms where instructor and students examine this range of samples, students rarely submit work for the assignment that falls in the "below expectations" category. Students' understanding of the criteria has been deepened in the process of engaging in a discussion of quality work.

Another strategy is to lay out the course outcomes and the design of an assessment and to engage students in articulating criteria that they think would be appropriate for "a good performance" on the assessment. Some faculty use this approach in early courses; others prefer to give students experience in using criteria before asking students to try to design them. In many advanced courses, codeveloping criteria is a standard practice, with faculty using the process as an unobtrusive measure of the level of understanding of key concepts, skills, and ways of thinking in the discipline.

Where Am I Now?

How do learners compare their actual performance with the standard? As a process, feedback connects samples of student performance with a set of criteria as a reference to the goal, outcome, or standard. Alverno faculty often describe their work with beginning students in particular as helping those students to see *how* their work demonstrates the criteria. It is not enough to check off a criterion; rather, faculty need to show students *what they did* to show evidence of meeting a criterion or a set of criteria. As sociology professor Stephen Sharkey reflects, "If I say something is good and they don't know what 'good' is, then that is not very helpful." English professor Judith Stanley says that helping a student understand what she did "is one of the most important things that we can contribute to the student's learning. If she can understand why something is effective, why it's important to the discipline, or why it's important in critical thinking . . . , then I'm really describing back to her that effectiveness."

Similarly, faculty report that students often do not initially understand that they did not demonstrate expectations as captured in criteria. Again, they need to be able to see their performance placed next to the criteria to see how the performance did and did not meet expectations. Sometimes concrete description of the performance is enough to point out the gap, but many faculty find that questions can help guide the student to see what is short of the mark. In a course I have taught in which students are asked to use an explicit structure for analysis, for example, the absence of a clear thesis or other direction statement signals a problem. One criterion describes the expectation that the student "connect with the audience through purposeful structure, establishing and maintaining focus on a clear

purpose, and providing transitions to clarify relationships between most points of development." This criterion helps the student see that, without a direction statement, a reader would have difficulty knowing where the analysis is going. When the student misses the mark, it is likely that she is not thinking about the needs of the reader, or seeking to make the reader's job of understanding easier. So I may ask questions like these: *How might you help a reader understand where you are headed so that they can follow you to that destination? If you thought of the thesis as providing a minimap of this piece, how would you create or revise it?* Or I might make statements that invite the student to reframe the issue: *Put yourself in your reader's shoes and see if you can find a clear direction toward the beginning of this piece. If you cannot find a clear direction statement, think about what the reader needs and create or revise such a statement.*

Criteria themselves can be arrayed to assist students in understanding how their performance relates to expectations for a quality performance. One term for those arrays of criteria is *rubric,* a Latin word originally used for instructions in medieval documents that were penned in red ink. Three types of rubrics are described here: scoring rubrics, developmental rubrics, and single-point analytic rubrics. For each set, I also look at their utility in helping students to compare their work to the standard and to answer the question "Where am I now?"

Scoring Rubrics

When faculty members use scoring rubrics, they assume that performances will fall along a continuum, and so they identify a number of possible performance levels along that continuum. Not only is it difficult to spell out — in advance — seven, five, or even three discrete levels of performance, but other issues with scoring rubrics suggest the need for careful thought in creating them. In my work with such rubrics in K-12 education, I am often dismayed to find published rubrics following a formulaic pattern that approaches *does nothing, does a little, does a little more, does a lot*. Like this fairly blunt example, many scoring rubrics have at least one level that is stated negatively and others that fall prey to using only quantitative indicators. Such indicators invite students to look more at *how many* (e.g., pieces of evidence, technology applications) they include than at *how well*

they produce a quality product or performance. Another potential critique of scoring-level rubrics is that they can simply become surrogates for letter grades.

The first sample of a rubric (Figure 3) is like many observed in K-12 and college settings. This rubric contains only some of the elements for which four discrete criteria would be listed. Meant to capture the way in which distinctions in scoring points are developed, this rubric has only a partial list of the potential categories for giving feedback on writing performance.

Figure 3.
Typical K-12 Scoring Rubric for Writing

Rubric for Writing				
Category	4	3	2	1
Format	Follows formatting guidelines and is the requested length	Follows most formatting guidelines and is the requested length	Does not follow formatting guidelines and is over or under requested length	Does not follow formatting guidelines and is significantly over or under requested length
Organization	All necessary information is included and all irrelevant information is excluded	All necessary information is included; some irrelevant information is included	Some necessary information is not included and/or too much irrelevant information is included	Too little necessary information and too much irrelevant information are included
Spelling	All words are spelled correctly	Most words are spelled correctly	Numerous spelling errors	Spelling errors distract from readability

The major problem with this rubric is that it focuses on compliance with directions, not on quality work. Focusing on quantitative distinctions makes it difficult to break open issues related to the quality of student writing. Moreover, while a judgment using this kind of rubric might provide minimal feedback in the form of a score, it offers less help in understanding the learner's writing performance. This type of scoring rubric is usually intended less for instruction and more for making a judgment. Faculty members who use this kind of quantitative scoring rubric may focus on what Stiggins (2005) calls "assessment *of* learning" — a frozen picture of a specific point in time — rather than on feedback *for* learning. Nonetheless, the quality of judgment depends upon whether the rubric truly captures elements of quality or merely elements of compliance.

It is possible, however, to create scoring rubrics with very meaningful distinctions among levels of performance. Very good examples of high-quality rubrics can be found in the work developed for edTPA, a nationally available teacher performance assessment developed by Stanford University and the American Association of Colleges for Teacher Education. The scoring rubrics for edTPA describe clear qualitative differences in performance, showing increasing sophistication across five levels. See Figure 4 for an example of just one of the rubrics for elementary mathematics in a three-to-five-day segment of instruction during student teaching.

This rubric may be used for "assessment *for* learning," because the evidence from the candidate's performance may be connected to meaningful qualitative expectations that represent essential elements of one of the tasks of the teacher — using knowledge of students to justify instructional plans. In courses prior to student teaching, fieldwork supervisors are encouraged to use the rubric to give detailed feedback (in this case on planning, but the 15 rubrics for edTPA in every teaching field address planning, instruction, and assessment). During student teaching, the rubric is used for "assessment *of* learning" because it allows a "point in time" judgment along the continuum; this judgment is made as the "score" the student teacher receives on each of the 15 elements.

To see other types of rubrics that address the meaning of quality performance and offer support for understanding the comparison of student work to the standard, we next look at two more types: developmental rubrics and single-point analytic rubrics.

Figure 4.
High-Quality Scoring Rubric in Teacher Education

Rubric 3: Using Knowledge of Students to Inform Teaching and Learning

How does the candidate use knowledge of his/her students to justify instructional plans?				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Candidate's justification of learning tasks is either **missing OR represents a deficit view** of students and their backgrounds.	Candidate justifies learning tasks with **limited attention to students' prior academic learning OR personal/ cultural/ community assets.**	Candidate **justifies** why learning tasks (or their adaptations) **are appropriate using** • examples of students' prior academic learning OR • examples of personal/ cultural/ community assets.	Candidate justifies why learning tasks (or their adaptations) are appropriate using • examples of students' prior academic learning AND • examples of personal/ cultural/ community assets.	**Level 4 plus:** Candidate's justification is supported by **principles from research and/ or theory.**
Candidate makes no connections to research and/ or theory.	**Candidate makes no connections to research and/ or theory.**	**Candidate makes superficial connections to research and/ or theory.**	**Candidate makes connections to research and/ or theory.**	

Developmental Rubrics

Faculty members who use developmental rubrics assume that learners are on a path of growth that is somewhat predictable and that the criteria spelled out provide learners with a sense of both "how far along" the path they are and what the next phase of growth looks like. These rubrics help students to compare their work to various "levels" to determine where they are in the process of completing a quality performance. Alverno's communication criteria (for reading, writing, listening, and speaking) are examples of developmental rubrics. An example of the four levels on one aspect of the Alverno speaking/media developmental rubric (Alverno Communication Department, 2006) in Figure 5 provides a case in point. Students use the rubric, supported by faculty feedback, as a guide to their growth in "speaking on one's feet" across the curriculum. To graduate, they must achieve level 4: "Gives a consistent impression of communicating with the audience without reliance on scripted or memorized input."

Figure 5.
Excerpt from Alverno Speaking Criteria as a Developmental Rubric

1. Connects with audience through SPEAKING ON ONE'S FEET

L1 Speaks to an audience for at least a minute with little reliance on scripted or memorized input

L2 Communicates *to* an audience, long enough to suggest the speaker has internalized her message, with little reliance on scripted or memorized input

L3 Communicates *with* the audience, giving the impression of both thinking and speaking spontaneously without reliance on scripted or memorized input

L4 Gives a consistent impression of communicating *with* the audience without reliance on scripted or memorized input

Interested readers may access the full set of criteria for speaking at http://ddp.alverno.edu/production/resources/criteriasheets/speakingcriteria.pdf.

The benefit of a developmental rubric is that it can be written in positive terms, describing what learners *can do as they grow and develop*. When

coupled with explicit feedback from a faculty member, this kind of rubric may help students see where they are in their developmental path to a significant goal: speaking on one's feet.

Single-Point Analytic Rubrics

Faculty members who use a single-point analytic rubric (see Figure 6 for an example) assume that the outcome or learning goal is the most important element. Thus, they spell out the criteria for a quality performance, leaving space for an instructor to give feedback on where and how learners met expectations, where and how they exceeded them, and where their performance calls for continued effort. A single-point analytic rubric is a set of criteria that unpacks what the expected performance requires. Its format permits rich and detailed feedback to the learner; this feedback may provide information comparing student work to each criterion — whether in the form of *evidence* of how the student met or exceeded the criterion, *questions* that can help the student see where the gap is between her performance and the expectation, or *questions* to push her to go beyond the criterion.

For most classroom assessment, single-point rubrics provide a strong basis for feedback to support learning. Once the instructor establishes what she expects, she can always describe how a student went beyond the criteria (in our experience, students will go beyond the criteria in very different ways) and she can describe what efforts are needed in order to meet the criteria. Some instructors use three or four boxes, with only the "aimed for" level of performance filled in with the criteria stated, in order to have space to indicate where the performance meets expectations, where further effort is needed, and what is exceptional. In each, though, the judgment of where the performance falls on a continuum is not the key point. Rather, the evidence drawn from the performance and the feedback (in the form of descriptions, questions, encouragements on a learner's performance) is what makes this kind of rubric a valuable tool. This rubric sends a message to students: You are continuing to learn through this rubric on this assessment. Rather than merely receiving a score and a judgment of inadequacy, students receive diagnostic information to further their achievement of a performance that meets criteria.

Figure 6.
Single-Point Analytic Rubric for Writing

Areas that need work (Let's talk about these.)	Criteria for this performance	Areas in which you truly excel
Evidence and concerns:	Establishes and maintains focus on a clear purpose, using transitions to clarify relationships between most points. Evidence:	Evidence of "going beyond":
Evidence and concerns:	Uses language that shows general awareness of appropriate word choice/style/tone — avoiding vague, empty, or condescending expression. Evidence:	Evidence of "going beyond":
Evidence and concerns:	Makes clear what is taken from a source and what is an original idea. Evidence:	Evidence of "going beyond":
Evidence and concerns:	Supports most generalizations with examples and/or evidence meaningful to the audience. Evidence:	Evidence of "going beyond":
Evidence and concerns:	Demonstrates accurate and appropriate application of designated or selected ideas. Evidence:	Evidence of "going beyond":

Adapted from Alverno Communication Department (2006)

The single-point analytic rubric is an excellent way to help students see where they are in relationship to the criteria for a given performance. While not necessary, the boxes are helpful for giving students a visual picture of their performance in relationship to expectations, but faculty descriptions and questions are the key parts of the feedback process.

Once students have a sense of how their performance compares with the criteria for a quality performance, they can move on to next steps, using the feedback to come closer to the standard or goal of their learning.

How Can I Close the Gap?

Faculty at Alverno find that criteria play a central role in feedback to help students close the gap between their present level of performance and the performance they aspire to. Biology professor Becky Burton comments, "When we think of feedback here, normally we're thinking of feedback as a way to improve student performance." Education professor Pamela Lucas asserts, "It's the feedback that students get that makes the learning happen."

What evidence is there that criteria, in fact, support student learning? The literature about criteria and feedback on performance provides mixed, even contradictory, views about utility. One key appears to be whether the context for feedback includes the use of grades. Many studies suggest that when students receive a grade, they are less likely to attend to criteria or to use feedback to improve performance (Carless, 2006; Chanock, 2000; Sadler, 1989). The implication is that a grade functions as *the* criterion, making other feedback irrelevant. Our experience at Alverno — in the absence of letter grades — tends to be quite different. Because faculty use criteria with a clear sense of purpose, learners come to see a set of criteria as providing clarity and accessibility as they begin an assignment or assessment. They look for specific feedback related to the criteria to inform their understanding of both their current level of performance and their next steps. A nursing student, reflecting on her efforts to write in her discipline, said:

> I've taken some of the feedback, especially when I was working on transition sentences for paragraphs. . . . I'd use that and focus

> on that very next thing when I was writing my next paper. Then, I would watch my own speeches and I'd count how many times I said "um" and I'd say, "Okay, I need to work on that." You get that in feedback, too. It's the same thing with other criteria, whether it's analysis or problem solving: "You need to go a little bit deeper," "That was too 'surface,'" and "Think of ways you can go deeper by saying, 'What questions can I ask to solve that?'"

Because students come into the college environment from settings in which they experienced grades, the literature questioning the utility of criteria in feedback has some implications for our work with beginning students. Unless faculty members engage in explicit discussion of the role of criteria and, just as important, take time to talk about the criteria for a specific assignment or assessment, students may miss the benefits of having criteria. An Alverno alumna, reflecting on her progress through the curriculum, revealed that she "kept getting my papers back to redo, until I realized that if I looked at the criteria before I handed them in I could be more successful." This statement suggests that faculty members might well be more explicit in talking with students early in their work at the college about the benefits of using criteria and more focused in modeling, through feedback, how criteria can help students to thoughtfully examine the demands of a performance task and its expectations for quality.

Over time, students learn to value feedback and to seek out understanding of criteria to help them improve. A business and management student commented:

> Writing was not my strength. I'd get feedback — "You use run-on sentences" — and I'd think, "Oh my God, I hate writing even more." Finally, I thought I should seek out [my teacher] and ask, "How can I improve?" And I think that's how feedback for me changed over time. Instead of seeing it as negative feedback, I saw it as "what can I do with it and how can I improve on my next assignment."

Some Alverno faculty members encourage learners to use criteria to suggest places where they most need and want feedback. They encourage learners

to incorporate questions they have about their work in relation to their performance tasks, linked to the criteria, as part of their self assessment. The faculty members then provide targeted feedback in response to those questions. English professor Judith Stanley describes the benefit of such an approach as a conversation with the student about her growth:

> I really see feedback as a conversation with the student, and that's why I see it as so central to her education. I think it starts with the student's performance and our identification of criteria and all of that. But my feedback to her is really just the beginning of a series of discussions on how to keep on improving from performance to performance, and there's just never enough time in the classroom itself to do all this. There are certainly opportunities to do feedback one-on-one with the student. But I think even written feedback is a conversation. I see it that way. I invite my students to respond to my feedback.

Conclusion

Three purposes of criteria seem particularly salient when looking at the relationship of criteria to feedback on performance. Criteria can provide the learner with clarity about the learning outcome as a goal, make learning more accessible, and focus feedback to support ongoing learning. As a faculty member, you have probably wondered why your students looked at you blankly when you thought you were being perfectly clear about your expectations for a major assignment. You might take comfort in the cartoon of the basketball coach addressing his team of youngsters when he says, "The reason we never win is because you never get the ball in the basket, which is, after all, the whole idea of the game." One of the players asks, "Why has this been kept from us?" If criteria are to provide clarity about the goal, they need to reflect the meaning of "the whole idea of the game."

Criteria are also about equity. Good criteria make learning more accessible by making expectations explicit and inviting learners into conversations about the meaning of the goal. "School" as we do it can seem to some learners to be enmeshed in a "code" that some of their peers understand but which escapes them (Delpit, 1995). Criteria that break open the meaning of

a good performance help to crack the code for these learners. They are able to engage with the work you assign when they have a sense of what they will be judged on.

Criteria also provide a focus for feedback that supports ongoing learning. Using criteria to look at an individual learner's work provides that comparison of the actual performance with the standard for quality that Sadler (1989) points to. Good feedback uses criteria to underline what the learner did effectively, to raise questions about next steps where she fell short, and to make suggestions as appropriate that can help close the gap.

Answer key for quiz on page 29

a.	Throughout the writing, clearly shows how others' ideas relate to his/her own thinking	C
b.	Provides citations from original sources using APA style	D
c.	Incorporates at least three examples	D
d.	Uses examples to effectively support an idea and create a picture for the reader	C
e.	Uses at least two computer applications from the list provided in the presentation of the project	D
f.	Effectively uses technology to assist the audience to understand the findings of his/her project	C

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Chapter 3
How Faculty Feedback Changes Over Time

John C. Savagian

College faculty use feedback to shape various aspects of their professional development. They receive feedback on their scholarly work in the form of peer reviews, on grant applications, and on internal reviews for tenure and promotion. They count on their discipline department peers to give them feedback on their classroom teaching methods. Many also seek or are required to gather student feedback on their teaching. Clearly, professors are familiar with getting and using feedback on their work across a host of categories and with multiple modes. Yet when faculty evaluate work created by their students, the options for feedback often shrink to a letter grade or, if the students are lucky, comments scribbled in the margins of their compositions.

This disconnect between faculty members' own expectations of feedback and the lack of feedback on student performance may seem ironic but should not be surprising. Teachers were students once, and more than likely as undergraduates a letter grade was the sum total of external evidence available to evaluate their own performance. With no feedback models available to them as students, with no pedagogical rationale for feedback instilled during their graduate studies, and with no expectation on the part of their employing institution to provide feedback, college professors may follow the time-honored traditions of their predecessors. However, in an educational environment in which outcomes are used to help the student develop a full spectrum of learning — from remembering to understanding, and then to applying her knowledge — providing feedback that captures the student's ability to develop these dimensions becomes a regular practice for faculty and an integral part of the student's education.

At Alverno College such a learning environment exists. Though faculty may not come to the institution with a firm grasp of the fundamentals for giving feedback in an outcomes-based environment, the mentoring that takes

place within and across disciplines assures that not only will faculty use assessments to evaluate student performance, but students will benefit from qualitative feedback that moves learning forward.

This chapter offers a toolbox for teachers who are ready to apply feedback principles in their classrooms. The feedback samples and concepts described herein come from both experienced and relatively new faculty working in a variety of disciplines. We begin with a general discussion of how the use of feedback by Alverno faculty has changed over time. As we move into an exploration of feedback samples, we consider different ways in which Alverno faculty diagnose student learning within the context of course outcomes and through the application of qualitative performance criteria. We then consider how faculty balance descriptive and analytical modes in providing feedback. And we observe how, to the experienced assessor, feedback invariably means feed-forward, as student and teacher work together to apply observations and lessons from one assessment to the next learning opportunity.

How Feedback Changed the Nature of Our Teaching

One of the common refrains from Alverno faculty regarding their use of feedback is that over time it creates a fundamental shift in the nature of their teaching. As English professor Judith Stanley notes, "Working with feedback in the way that we do has changed our teaching because now our teaching is not simply teaching the material in the classroom but also teaching students how to understand their own learning." This shift in the focus of teaching from discipline to student comes slowly, over time. Graduate students with an intense relationship to disciplinary content typically approach their teaching with the subject as the main focus. However, the use of feedback, when properly tied to outcomes and criteria, realigns the instruction so that educators put an emphasis on teaching the student. Desiree Pointer Mace, a professor in Alverno's School of Education, reveals how feedback encourages her to observe student learning more closely and, when necessary, to change her teaching approach. "I think that something that has really changed in my teaching is the up-front work. I have realized that the more descriptive and explicit I make my criteria, the less redundant the feedback I give my students, and so I am

continually trying to calibrate that because I want it to be individualized. I don't just want to have a checklist." Similarly, political science professor David Brooker notes that "the emphasis on feedback has really forced me to be much more explicit about what's good about a particular paper." The key concept for these instructors is being transparent with their students about what a successful performance looks like. Only when they are clear up front with learning outcomes that are tied to performance criteria will their feedback speak directly to the students. Professional communication professor Joyce Fey further clarifies this relationship between feedback and criteria:

> Initially, I viewed the criteria as just discrete — one item after another. As I've continued to work with criteria and students, I think I've been able to achieve more of a holistic look at what are the essential things contained in this assignment or this assessment. . . . The better the criteria, the better the quality . . . of feedback that I can give them.

As faculty describe how their ability to apply feedback — what we might call their feedback skills — develops over time, they often speak of their education as though they were back in school again. As they become acclimated to an outcomes-based teaching and learning environment, they learn to articulate their observation of student performance against explicit criteria, and translate it to useful, narrative feedback for the student. Consequently, instructors also recognize how valuable individualized feedback is to students who are seeking to evaluate their performance against those same criteria. Rote feedback from standardized rubrics or checklists falls short of what students deserve from a professional appraisal of their work. Developing one's feedback skills rarely comes easily, and for first-year faculty, it is an especially challenging process.

Faculty's First-Year Experience with Feedback

Similar to first-year college students, new faculty have a lot going on. They are adjusting to a new work environment, possibly moving to a new community, trying to read the academic culture, finding a balance between teaching and research expectations, and making a host of other adjustments,

both personal and professional. Even in the current higher education climate in which outcomes are becoming de rigueur, most doctoral graduate students are not trained to create authentic assessments based on course and program outcomes, let alone provide qualitative feedback tied to those outcomes. To further complicate the challenges, first-year faculty, many of whom are inexperienced in delivering integrated feedback, often teach first-year college students, for whom it is especially critical that feedback clarify the relationship between criteria and performance to support their learning.

The following experiences of a professor who is relatively new to Alverno College highlight how greater attention to student learning tied to performance criteria changes the nature of the instructor's use of feedback and how she envisions the overall learning experience. Patricia Lewis is a third-year religious studies faculty member who came to Alverno with teaching experience in a traditional college curriculum. She was used to giving content knowledge exams, and her students were for the most part focused on the grade she gave for their work. She noted that prior to teaching at Alverno, her feedback was product-based and not centered on criteria. Naturally this carried over when she began teaching at Alverno, even though her assessments, often shaped from examples provided by her colleagues, articulated an integration of abilities and content. Drawing from her previous experience, she provided feedback that primarily focused on how well students *expressed* rather than *demonstrated* learning drawn from her instruction. As she gained more experience in an outcomes-based curriculum, she changed her feedback to reflect her developing pedagogies.

For example, in a general education course designed to introduce first-year students to ways of knowing through the use of four disciplinary frameworks (history, English, philosophy, and religious studies), students read Plato's "Allegory of the Cave" and then listen to and read "The Lesson," a short story by Toni Cade Bambara. To assess their learning, students are asked to explain how Bambara's story relates to what Plato described in "The Cave." The criteria for this performance require each student to:

- Creatively analyze "The Lesson" using symbols of "The Cave";
- Give specific examples from both stories to thoroughly support the analysis;

- Provide a short, relevant anecdote from personal experience that resonates with the stories;
- Write a cleanly edited, well-supported four-page paper that successfully communicates to the audience the insights from the analysis.

Lewis's first time giving feedback to her students was much like her experiences prior to Alverno. She provided free-form and lengthy narratives that focused quite a bit on how the students structured their papers, organized their ideas, and expressed themselves. In other words, she focused mostly on their communication skills. This is of course a valuable ability, but it is not the only one. In addition, as noted above, the assessment criteria focus more on analysis than on effective communication. As Lewis began to pay greater attention to assessment criteria, she was able to home in on how well her students made comparisons and analyzed the relationships between the stories. With assistance from her colleagues and participation in the Writing Roundtable (a monthly faculty dialogue session dedicated to improving student writing skills), she learned to use criteria to better shape her feedback. As a result, her feedback became more specific. She still articulates whether a student is properly using grammar and has the composition skills appropriate to the course level, but she is now also highly attentive to the criteria most germane to the assessment. Furthermore, she no longer "corrects" her students' papers but rather helps them to see positive as well as negative patterns in their communication. In addition, Lewis makes certain that she not only reiterates the performance criteria but also integrates self assessment into the process. This requires the student to go back over her work and identify where and how she met criteria. Just as important, it allows the instructor to converse with the student about the student's observations about her learning as well as about her performance on the assignment.

In looking back over her own development in using criteria and feedback, Lewis observes that she has become more "step-oriented" in how she thinks about designing assessments. Her analysis of her feedback from the first couple of times she taught the course led her to introduce to students a simple template for how they should structure their analysis of "The Cave" and "The Lesson." She also changed the dynamic of her feedback from one

that was strictly critical to one that also highlighted students' positive efforts in meeting criteria. As she notes,

> Although the description, criteria, and self-assessment . . . are mostly the same, now I give them a template that more fully explains and explores each criterion. This has helped them produce much better assignments because they better understand what I am asking for. They also end up with a better sense of how they are meeting criteria.

As Lewis demonstrates, a subtle shift in orientation toward descriptive feedback tied to criteria will cascade throughout the teaching moment, leading to clarity of purpose for the teacher and for the student, with tangible improvements in both their performances.

As faculty grow in experience with providing individualized feedback, they begin to discern patterns in student performance over time, allowing for even more personalized and contextualized feedback. History professor Jodi Eastberg, more experienced in the use of outcomes and criteria to provide feedback, uses multiple evidence points to present a picture of the student's performance. Eastberg demonstrates her attentiveness to how students learn in her course, and how they perform over time and over multiple assessments. In this next example, Eastberg also considers students' self assessment of their performance as an additional insight to inform her feedback.

The following assessment and feedback example is from the same first-year humanities course and with the same outcomes as the previous example. While outcomes for multiple-sectioned courses are shared, the method for teaching students and assessing their learning is still up to the individual instructor. This is important to note and demonstrate because of the often expressed concern that shared course outcomes lead to rigid standardization that stifles student creativity. The assessment prompt asks the student to bring together and demonstrate her learning by creating a movie idea, based on key aspects of the course experience. She is asked to try to "sell" this idea to her peers. The assessment has three parts: a presentation, an essay that articulates more fully the movie concept, and the student's self assessment.

The instructor created a set of criteria for each part.

Speech criteria:

1. Did you clearly observe and accurately infer the meaning of the story that you presented?
2. Did you create a poster that used symbols as a form of expressing your perspective and allegorical story?
3. Did you clearly communicate your plot summary in a way that was brief, yet clearly outlined your plot development?
4. Did you present the importance of gender, class, and/or race in your story?

Written essay criteria:

1. Did you use Standard English, well-developed paragraphs, and have a clear introduction and conclusion to your essay?
2. Did you clearly articulate how you used course concepts and material in the development of your poster?
3. Did you demonstrate an accurate and clear understanding of the humanities — history, religious studies, philosophy, and literature?
4. Did you articulate your own point of view through your allegory using questions from one of the humanities disciplines?

Self assessment criteria:

1. Did you articulate an understanding of course material by offering an accurate and detailed self assessment based on the course outcomes?

An example of Eastberg's feedback for one student highlights the manner in which criteria and feedback go hand in hand in helping to guide the student through her learning (see Figures 1 and 2). The student's self assessment, completed prior to the instructor's feedback, is used by the instructor to add additional insight into the performance.

Figure 1.
Presentation Feedback

Did you clearly observe and accurately infer the meaning of the story that you presented?	Yes, you clearly and accurately interpreted the story of Columbus — his reasons for traveling (economic and exploratory) and the impact of his voyage (destroying a culture and creating a new culture) — in your presentation.
Did you create a poster that used symbols as a form of expressing your perspective and allegorical story?	Yes, you used symbols of nature to represent the land that was coveted, the urban scenes to represent the conquerors, and the fragility of the flower as symbolic of what was being destroyed. Moreover, you used color to suggest the position you took in your film — with the urban areas in dark/mysterious colors and the flower in bright/cheerful colors.
Did you clearly communicate your plot summary in a way that was brief, yet clearly outlined your plot development?	Yes, your plot summary clearly articulated your story. As you note in your self assessment, it could have been more detailed/suspenseful. By being very direct and explicit in your writing, there is a way to express more with fewer words. Something to work on in the future.
Did you present the importance of gender, class, and/or race in your story?	Yes, you represented the importance of race in the experiences of Europeans and the indigenous peoples of the Americas in your speech through your attention to the ways that the native peoples of the Americas were treated by European colonizers.

Figure 2.
Essay Feedback

Did you use Standard English, well-developed paragraphs, and have a clear introduction and conclusion to your essay?	Yes, you did an excellent job of formatting your essay, responding to all of the questions and summarizing at the end on the course overall. Well done. This was one of your more thoughtful self-reflections this semester and reflects your ability to self and peer assess. Nice work!
Did you clearly articulate how you used course concepts and material in the development of your poster?	Yes, you clearly articulated how you adapted the Columbus story to a futuristic story. You inferred meaning from the past and applied it to a future story. Very clever.
Did you demonstrate an accurate and clear understanding of the humanities — history, religious studies, philosophy, and literature?	Yes, you clearly understood the historical realities of the event, asked important philosophical/ethical questions regarding the material, and ultimately demonstrated the creativity and expression of literature through your creative writing.
Did you articulate your own point of view through your allegory using questions from one of the humanities disciplines?	Yes, you clearly articulated your own point of view through the allegory you told using questions from history and philosophy. Your point of view was that it is unethical to destroy cultures for the purpose of economic gain.
Did you articulate an understanding of course material by offering an accurate and detailed self assessment based on the course outcomes?	Yes, you articulated an understanding of the course material in that you were clearly impacted not only by the Columbus story, which featured prominently in your final poster, but also your expression of global perspective in light of your reading of *Under the Feet of Jesus* and *Between Two Worlds*.

One can observe in Eastberg's comments that her feedback is clearly tailored to the individual student's work at that particular moment. However, her feedback also reveals a familiarity with the student's learning over time in the course. Eastberg knows, from providing similar feedback over the semester, that the student's self and peer assessment has improved over time. In a final comment regarding the student's overall performance in the course, Eastberg notes the student's consistent work and engagement in the class and her strong writing skills, but also encourages her to continue working on her presentation skills while noting her marked improvement over time.

The consistent use of feedback in a course gives the student a roadmap for her continued learning, pointing out obstacles and opportunities along her way, and it also helps the instructor evaluate teacher effectiveness by drawing patterns from the feedback. As a result, instructors develop a greater understanding of how students learn in their courses and how they respond to a particular brand of instruction. As Margaret Earley, professor emerita of religious studies, explains, the application of feedback extends well beyond the immediate classroom experience:

> One of the ways [feedback] affected my teaching . . . is to be more aware of the developmental nature of the learning that the students are engaged in. And therefore my design of the course, my integration of the ability and the content, has made me much more aware of where the student is at a particular level and then how to really build in complexity and depth for student learning as the student progresses — all in relationship to the ongoing transformation of the student and who she is and what she's able to do.

Earley identifies a central hallmark of feedback in an outcomes-based curriculum: to be most beneficial to the instructor and to the student, feedback from a particular performance must be placed within the larger context. The student must see herself within a continuum of a personal learning process rather than at a fixed or settled understanding of her ability or her knowledge of specific content. The instructor likewise must draw evidence from feedback to assess and build on the sum total of her teaching.

Mathematics professor Susan Pustejovsky observes that prior to teaching at Alverno, she was more likely to think of her class of students holistically, rather than as individual learners. Now she has a different understanding of who her students are and how they learn, which leads her to ask the fundamental question: "How can I help them to take that next step?" She adds, "It feels like it's really necessary to understand what kind of tasks to give, so that I can understand where they are in their learning."

While feedback centers both the student and the teacher in a particular learning moment, the more explicitly the feedback relates to the individual student, the more adeptly the student can use it to help evaluate her performance and move her learning forward. A good example of this is an assessment from an experimental psychology course taught by psychology professor Kris Vasquez. Similar to prior examples, Vasquez uses a word-processed chart to articulate outcomes, elicit self assessment, and align the outcomes with feedback; for this course, though, the outcomes are more disciplinary in focus and are at the advanced level. Of interest here is the collaboration between instructor and student as the project moves forward, and how it is reflected in the student's self assessment and the instructor's feedback. One of the advanced outcomes in psychology at Alverno is self-reflection. For this assessment, the criterion related to that outcome is: "Evidence that the student appropriately adjusted her course of action when needed." To seek this evidence, the student was asked to respond to the following question: "What were the greatest difficulties you encountered in designing your experiment, and how did you overcome them?" The student responded:

> My greatest difficulty was my data collecting, inputting, and interpreting it. After going to a few classes still didn't provide me with enough participants, I utilized my living in the residence hall, and asked people walking past me in the lobby to participate in my study. I asked for help in figuring out how to input my data from the professor. I asked other classmates to help me figure out how to interpret the data.

The student's self assessment gave Vasquez an opportunity to provide feedback that connects back to the discipline: "You mentioned in your self

assessment that you got help from me for calculating the statistics, and that you looked to your classmates for help in interpreting them. Science is a collaborative activity, and I'm glad you got help." Feedback, when combined with explicit criteria that reflect the disciplinary outcome and when tied to a student's self assessment, centers the instructor and the student in the teachable moment, one that builds upon the sum total of the student's learning in the course.

Faculty who consistently use feedback refer to the internal dialogue it creates between a self assessment of their teaching and the ultimate goal of student learning. Economics professor Zohreh Emami suggests that feedback holds her "feet to the fire, because I never know quite if the outcomes and criteria I have are working or how they're working, or whether they mean anything to the students or even sometimes to me." Similarly, Alverno faculty report that the consistent use of feedback improves their classroom instruction because it centers their attention on how each student learns in their class. As nursing professor emerita Zita Allen emphatically expresses:

> How can I say I'm teaching if I don't know how each individual student learns? When I get her performance, whether it is a speech in class, a paper, or just even an answer to a question, I know where she is [in order] to give her an answer, to give her feedback, to help her know.

Alverno faculty have learned over the years that for feedback to be an effective learning tool for students, they must offer descriptive analysis of the student's performance for each criterion and explicit statements about whether or not the student was successful.

One example of blending the descriptive with the explicit is a nursing program assessment in which students design a case study that they present to their peers at the end of the semester. This allows students the opportunity to articulate their understanding of a theoretical concept as it is applied during the semester to their professional nursing practice with clients.

The following feedback sample was given to a nursing student who was in a clinical rotation in an ICU (see Figure 3). The student observed that while she had always sought to increase her knowledge in pathophysiology, she did not feel she was "meeting the spiritual needs of her patients as much" as she should. She continued, "I have learned, however, that by utilizing the [Lawrence] Brammer framework, I can convey a deeper concern for my patients — which I have always felt, but probably was not conveying because of my in-depth concentration on tasks, physiology, etc."

When providing the student feedback, the instructor completed a standard met/not met criteria table.

Figure 3.
Criteria Table

	STUDENT Criteria		INSTRUCTOR Criteria	
	Met	Not Met	Met	Not Met
1. Effectively and accurately applies theoretical concepts in the analysis of a client/family concern			X	
2. Clearly describes conceptually sound interventions implemented to achieve identified client/family goals			X	
3. Uniquely incorporates current research relating to the concept or theory			X	
4. Clearly and effectively articulates relationships among ideas			X	
5. Effectively engages the audience by using appropriate conventions and effective style in presentation situation			X	
6. Assesses own performance using explicit ability or disciplinary frameworks to organize self-reflection			X	

By itself, such a form is not overly useful feedback; it lacks a descriptive account of the student's work and fails to address the individual nuances of her performance. If a student only assesses her work by checking off a rubric, one could fairly ask what evidence supports her judgments. The same question can be asked of her instructor. Fortunately, the instructor for this assessment also provides a summative statement that describes the student's work. Note how the instructor carefully summarizes the student's work and assesses her performance against the qualitative criteria laid out in the project:

> You effectively and accurately applied the theories of spirituality and hope in this final case study presentation to analyze the statements made by your client throughout the semester and to describe how you incorporated these tenets into your work with her as the time progressed in your relationship. You used four nursing articles and research studies — ANA (1998), Meyer (2003), Touhy (2001), and Watson (1988) — to assist you in providing current information about the significance of both concepts in today's nursing practice. In addition, you incorporated reference to your own spiritual beliefs and how they guide and direct your practice as an ICU nurse throughout the presentation. Your media was professional, you had clear objectives to organize your presentation, and you spoke effectively on your feet. I only have one recommendation to improve the delivery of your speech: I would stick to the time limit and keep focused. You digressed a bit and the time limit was exceeded by about 10 minutes, which was OK for this semester as we only had four presentations. However, I think some of your focus in the presentation was lost as you digressed. Otherwise, a very good presentation, supported by excellent reference works!

Describing to a student what she did in her own assessment may seem redundant, but such practice serves the important purpose of revisiting the performance through an instructor's lens. Moreover, the professor's summation alludes to specific criteria, thereby reaffirming how the student met each one. In this manner, a routine checklist is bolstered with explicit evidence showing the student how she performed on the assessment.

Faculty who become feedback masters know that feedback is an important element in the student's development and growth. They are aware that each assessment must be seen by the student as a continuum of lifelong learning. As history professor Kevin Casey notes,

> I think about student development very much as a series of cycles. There is instruction and then you're going to take a snapshot — particularly early in the semester — of where your students are at and what they are doing with that information. That informs your teaching, because when you start out, you design your instruction without even knowing who your students are. You have an idea of who they might be, and you can design a course, but you still have to teach the class. And so a lot of that early assessment is as much giving me feedback on the students as on how they are processing what I am trying to teach them. And then . . . it is developmental over time, so a lot of it is formative, and then it becomes more summative at the end.

In response, professional communication professor Joyce Fey adds that feedback, over time,

> becomes a conversation, because you identify a couple of important areas that you want to focus on with this student at this time, and you try to move her forward in terms of those areas. You let her know what things she is doing particularly well because she might not know that.

Alverno faculty have learned over the many years of providing descriptive and targeted feedback, and in sharing their experiences of the teaching and assessment of learning, that each student takes her own path to knowing and doing. When conducted with thoughtful reflection on the part of both student and teacher of what is learned and the challenges ahead, feedback shapes education into a process well beyond standardized answers and grading transactions. Feedback, when designed and delivered by dedicated faculty and through the clear prism of public criteria, is not just data of student performance, it is teaching at its highest level.

Chapter 4
How Feedback Changes Teaching

Daniel Leister

In order to teach effectively in Alverno's curriculum, it is important to know how the consistent and proficient use of student feedback changes teaching practices. Our experience is that a feedback-centered approach is a more effective way to foster student learning and to ensure that students are being prepared for their professional lives. We have also found that the centrality of feedback challenges instructors to creatively construct learning experiences for students that make students' involvement in the discipline engaging and relevant to their goals.

In this chapter, we focus on five changes that feedback brings to teaching: a focus on "real-world application" of knowledge; a way to help students meet stated outcomes; the irrelevance of grades; the need for feedback to be developmental; and the redefinition of an instructor's relationship with students. Throughout the chapter, we include the testimony of both instructors and students in how feedback enhanced their teaching and learning experiences.

Teaching Change No. 1: From Behaviorism to Real-World Application

To give an idea of how important feedback is in the Alverno curriculum, consider the testimony of an Alverno English major:

> I use the feedback I received when I first got here — in the first year and a half — and actually have been applying it to what I'm doing now in classes. . . . I am still getting feedback from professors to push my thinking for the future. I guess I like getting those chances to revise something because I wasn't a very strong writer. I've taken that feedback and I've had two articles

> published in magazines, and it's like, "Wow, I'm doing this now" based on feedback I've gotten from professors.

The type of feedback that this student — and every student — receives at Alverno College is markedly different from feedback given in most traditional higher education curricula, where feedback is rooted in traditional ideas about education. Shepard (2000) identifies the educational assumptions prevalent today and how to address their weaknesses. She states that 19th-century behaviorists created a teaching and assessment system in which students are provided "atomized bits of knowledge" that must be tested before students can move on to other bits of knowledge. Rote recall through objective testing became the basis of student assessment. Among other problems, this system makes students passive learners and eliminates low-scoring students, whose learning styles differ from those who thrive in a lecture/testing-based curriculum. Rather than instructors telling students what is right or wrong and how they can improve, feedback in this enduring traditional model typically consists of "reporting right and wrong answers to the student" and "counting miscues."

In place of behaviorist assumptions about education, Shepard advocates an educational framework that provides "equal opportunity for diverse learners" and shows students how to use knowledge to solve real-world, professional problems after graduation. We believe with Shepard that a change in classroom assessment and feedback practices is necessary to meet these objectives. Assessment should be oriented to "open-ended performance tasks" so that students can develop critical thinking, engage in problem solving, and "apply their knowledge in real-world contexts." By "open-ended," Shepard means tasks that allow students to use their individual imaginations to apply course and discipline knowledge in creative ways.

The educational system that researchers like Shepard criticize should be quite familiar to readers, as it is probably the one in which they received most of their education, including their higher education degrees. This system involves a pattern of lecturing, assigning work, and evaluating student progress with grades, and it is most often the system that new professors continue to employ when they take positions in colleges and

universities. The faculty of Alverno abandoned the "input and testing" approach to teaching in the early 1970s and replaced it with a student-centered system of education, in which assessment and feedback are integral parts of student learning that helps them prepare for careers. For many faculty, transitioning from traditional teaching practices to Alverno's feedback-centered curriculum requires significant changes in teaching philosophy and practice. Our students expect no less. In the words of one education student:

> In one class we had to do a big literacy plan, and I swear I submitted mine a hundred times for feedback, and every time [my instructor's] main theme was, "Did you think about this? How can you include that in there? How does it work with the frameworks and theories you're talking about?" That was the majority of the feedback, and at the end I felt like, "Wow, this is a good literacy plan." I felt like I'd touched on everything we'd talked about in class. I applied it to how I would actually use this information in the future in the field, or even teaching. I felt really proud of myself, and I'm sure the teacher was proud of me also because she saw where I was coming from in the beginning to where I ended up. That was a huge accomplishment.

At Alverno, assessments that simulate (or come close to simulating) situations that students will face in their professions are the means by which creative application occurs. Such simulations might include designing a business plan, participating in a town hall meeting, or writing an entry for an online historical encyclopedia. Done in this way, assessments are central to the learning process itself. One important result is that students no longer approach assessment as an added chore or an uninteresting game, attitudes fostered by traditional testing. Rather, students begin to see assessments as engaging and relevant because they give students the opportunity to practice transferring their knowledge to new situations. Their continued success in assessment hinges, in large part, on the instructor's engagement with the student through effective instructional feedback.

Teaching Change No. 2: Learning to Give Feedback That Helps Students Meet Outcomes

Outcomes provide students with a picture of what they will accomplish in a course, in a department, and in an institution. The feedback that students receive is meant to guide them to successful demonstration of outcomes. The importance of outcomes is articulated by Patricia Lewis, assistant professor in the Alverno Humanities Division:

> Teaching in this environment keeps me more connected to my course outcomes, which need to be concrete for my students and myself. Being clear about our purpose is an important part of my teaching here, and I remind my students (and myself) how everything we are doing fits into these outcomes. I have found in other environments that course outcomes are allowed to be somewhat vague, but here they need to be specific to give clear focus to my teaching.

What this professor also undoubtedly learned is that articulating clear course outcomes and becoming proficient at using feedback to aid students in meeting outcomes take time and practice and demand a particular approach to teaching.

There are three interactive dimensions of outcomes in operation at Alverno that influence all course experiences as well as the feedback students receive. The first and most pervasive is institution-wide outcomes. These outcomes are the eight Alverno abilities: communication, analysis, problem solving, valuing in decision making, social interaction, developing a global perspective, effective citizenship, and aesthetic engagement. The eight abilities are broadly and generically defined so that each discipline and department can determine the meaning of the abilities within the context of their own courses. For example, beyond its general definition, analytic thinking is defined differently in business, nursing, and history. Because of its generic nature, students can transfer the skill to a course in any discipline. Students who are developing their analytic skills in English, for instance, are also preparing to use and improve those skills in, say, a biology

course. Instructor feedback helps the student understand her analytic strengths and weaknesses and how she can improve.

An example from the Biology Department demonstrates the relationship between institutional outcomes and departmental and course outcomes. First, a biology instructor must become familiar with the institutional definition of analysis, which states that an advanced student "consciously and purposefully applies disciplinary frameworks to analyze complex phenomena" (Alverno College Faculty, 2005). This is just part of the "generic" definition of the ability used by the entire faculty, regardless of discipline. Analysis also informs departmental outcomes, the second dimension of outcomes. So, for example, biology students at Alverno are required, as determined by faculty in the Biology Department, "to apply concepts of biology to environmental and societal issues." (This is one of several major outcomes that a biology student is required to meet in order to graduate; the other outcomes are influenced by other abilities.) And when a new faculty member creates a new course in biology, she must create course outcomes, the third dimension of outcomes. A cellular biology course outcome states that by the end of the course, the successful student will be able "to analyze vital cellular processes within the cellular organelles, cytoplasm, and extracellular environment."

When the student, guided by feedback, successfully meets course outcomes in analysis (or any other ability), she also is meeting departmental and institution-wide outcomes. Assessment experiences provide the opportunity for a student to learn and demonstrate the outcome and to receive feedback on her performance. As outlined above, assessment at Alverno involves learning situations in which students have the opportunity to demonstrate that they can apply what they have learned. Here follows an example of an assessment in the cellular biology course:

> Students engage in group research on cancer at the cell biology level. Topics might include cancer as it relates to angiogenesis, cell division, signal transduction, or cell motility. Students present the results of their work in a written research report and in a group presentation to the class.

If a student is successful at the task articulated here, she is demonstrating course, departmental, and institutional outcomes. Both the teacher and the student must be clear about exactly what is expected of the student in order for feedback to be effective. Thus, it is necessary for new faculty to learn how to articulate criteria for success in an assessment. As shown elsewhere in this book, effective assessment criteria have a specific character in the Alverno assessment-as-learning process, and helpful feedback hinges on their proper articulation. Criteria are much like outcomes in that they are sets of statements that provide students a picture of success in an assessment. But they are more specific than outcomes because they help a student understand what she must do on a specific project. Here are three (of five) criteria for success on the assessment in the cellular biology course:

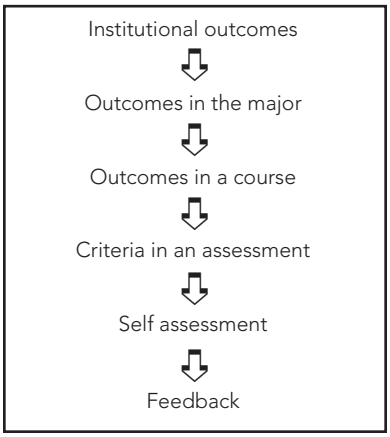
The student:

- using consistent and scientific reasoning, articulates types of changes that occur in normal cellular processes that induce cancer
- evaluates several approaches that impact the current focus of research and therapy in causes of cancer
- collaboratively organizes and presents material as an integrated, coherent whole.

These are good models for assessment criteria because they state what is expected of the student, require the student to integrate both abilities (analysis and communication skills) and course content, and together give the student a kind of picture that she can use to imagine a successful performance. They are the basis upon which an instructor crafts feedback, providing the student with a clear understanding of how she did or did not meet criteria and how she can improve her performance.

As we have been trying to show, there is an interconnection between the three dimensions of outcomes and assessment criteria. We call the progression from institutional outcomes to criteria *increasing degrees of specificity;* they can be pictured as shown in Figure 1.

Figure 1.
Progression of Outcomes



Course planning and feedback involve this process. To engage the process, instructors ask the following questions: *What abilities do I want students to demonstrate in my assessment (institutional outcomes)? How is the assessment going to help students meet course outcomes and, subsequently, outcomes in the major? What criteria can I articulate to give students a clear picture of what must be done to be successful in the assessment? How can my feedback to students help them improve on this assessment (if more time and work are necessary for success) or improve their performance on coming assessments, in this class and in the future?* Looking carefully across a set of performances can help the instructor see patterns that either document how clearly the student understands the outcomes or reveal "holes" in her understanding. In the words of one Alverno professor,

> Because I know I need to give students feedback, I have my outcomes much more clearly in my mind. And, since I know that students will be accountable if they don't meet the objectives, my feedback is going to help them move toward the objectives. This forces me to be clearer about my objectives.

Assessments are the prime teaching, learning, and feedback opportunities for both instructor and students. New faculty at Alverno must learn how to create assessments that provide the opportunity for students to demonstrate outcomes and improve their work through feedback. We call Alverno's assessment process *assessment-as-learning* because students are presented with some of the most powerful learning opportunities through assessment and feedback. Devising engaging assessments requires creativity on the part of professors. Very few assessments at Alverno resemble anything like traditional testing as described above (though exceptions are made in disciplines, such as nursing, in which traditional tests are mandated by the profession). Faculty must use their imaginations to design individual or group assessments and learning activities that require students to actively solve a problem, analyze a text or situation, make a moral decision, communicate information, analyze results, and so on. Devising effective feedback strategies is a key component here, as a chemistry student testified:

> I fell in love with chemistry, and I got to understand it because I wasn't allowed to quit. I don't think of feedback as hand-holding at all. If anything, we have to do more work, to show, because we can't just take one exam and get a grade and say, "Okay, you understand 70% of this. Good enough." Instead, you need to meet all of the outcomes, and if you don't meet them, then you have to do a reassessment or correct it and show that you can. It's a lot of work, but at the end you learn to be so critical of your own performance that you don't want to submit anything that's not 100% the best work you have.

This student's experience expresses a motivational reason why Alverno faculty replaced the input-and-testing model with the outcomes-based assessment-as-learning system. This teaching method allows students to embrace assessment as a creative intellectual activity and helps them better prepare for their professions. Assessment-as-learning also provides the opportunity for learning to develop over time, requiring teachers to give developmental feedback.

Teaching Change No. 3: Learning How to Give Developmental Feedback

We assume that it takes multiple opportunities for students to demonstrate outcomes or to meet criteria for any given assessment, so our feedback to students must consider gradual learning over time. Since any given assessment is rarely a one-time shot at success, feedback cannot be limited to identifying what a student did wrong or right. Rather, feedback must help students move incrementally toward success in meeting outcomes and assessment criteria. Giving feedback in this manner is likely new for many beginning instructors. Whether hand-written or recorded and accumulated over time in a digital portfolio or a series of documented exchanges, developmentally oriented feedback allows students to see progress across the curriculum. Steven Dunn, an assistant professor in the Humanities Division, states the challenge in the following way:

> I need to always be aware of the goal of the course and where I want these students to be at the end of the semester. This has to be balanced with the need to leave space and energy to respond to *this* specific class and where they are at any given point in the semester. This is a difficult task for the first-year instructor because we have not lived through these courses ourselves yet. To be successful, we have to have an appreciation for the diversity of course participants we may have in our classes.

Likewise, mathematics professor Susan Pustejovsky states that "the most significant change to my teaching as a result of using effective developmental-feedback strategies was that I could better help students make the next steps in their journeys."

What these instructors learned was that in order to give proper developmental feedback, they have to follow much more carefully each student's progress throughout the semester and, in the case of their majors, their entire time in college. Sadler (1989) uses the term *formative feedback* to refer to a feedback process that gives students the time and advice for meeting outcomes. Formative feedback, as Sadler sees it, creates a *feedback loop* between the student performance, instructor feedback, and improved student performance. Teachers must think about how to keep a feedback

loop going to provide students with a continual "repertoire of alternative strategies for success" as they move toward realization of higher learning outcomes. Giving helpful feedback requires faculty to understand where students are at each moment in their learning so that they can tailor student assessments and feedback strategies to move students to the next level of their development. Teachers must keep in mind this "bigger picture" of student needs and progression toward outcomes.

In Figure 2, English professor Mimi Czarnik gives developmental feedback on a student's essay. She has read the first draft of the student's work and is helping the student move to a second, more complete draft.

Figure 2.
Developmental Feedback in an Alverno English Course

1. Be sure to use precise terms whenever possible. I've marked a few instances where this is desirable. For example, you talk about "things" in your thesis — instead, think about what you mean (facets of the workplace?). Also, sometimes you use "stereotypical" when in fact it's typical (most clerical jobs are performed by women — this is a fact, not a stereotype). At the end of the paper you talk about "sexist jobs"— I'd argue it's not the jobs that are sexist but the fact that we devalue female-dominated jobs.

2. You jump into some solutions before you've fully explored the problems. I'd move the material on women moving into nontraditional jobs and organizations helping women to the end of the paper, after you've discussed the problems of gender-dominated jobs.

3. The section of your essay that needs development is your discussion of the problems (middle of page 2). This paragraph could be expanded into many paragraphs. You could first explore the variety of jobs that are one gender or the other (many of these examples came up in your interviews). Then look at the status of these jobs (secretary versus computer programmer, teacher versus CEO) — you can easily prove that the "male" jobs are higher status. Similarly, provide some statistics regarding pay discrepancy, both within jobs (as one of your charts points out) and between jobs (doctors versus nurses, principals versus teachers, and so on).

It is possible that more feedback will be given on the next draft. Students are grateful for the attention to their educational development throughout the assessment process. In the words of a science student: "[Feedback] has really boosted my confidence because none of the feedback has been blatantly negative. It's all helped me improve, improve, improve."

Alverno faculty devote much time and effort to giving feedback, but those immersed in the Alverno assessment and feedback curriculum have found ways to make the work efficient and manageable. In addition, a teacher's time and energy focused on creating assessments and giving feedback replace activities associated with traditional teaching, such as giving grades.

Teaching Change No. 4: Replacing Grades with Feedback

Assigning grades is so ingrained in traditional education that it is challenging for faculty to readjust their teaching and feedback strategies in a nongraded system. But what does a grade tell a student if it is not accompanied by detailed reasons why a student received an A or a C? For this reason, Alverno uses a modified "grade book" in our digital learning management system and accompanying assessment materials; professors indicate "progress codes" *(successful, in progress,* or *unsuccessful)* and add narrative explanation tailored to each student. An experienced Alverno professor states that early in her teaching career she heard students ask one too many times, "Why did I receive this grade?" She became committed to providing answers to that question. How many students ask themselves the same "But why?" question when they receive a grade on a paper? How likely is it that students will receive sustained, motivational, and developmental feedback when the purpose of the grade is to rank them and weed them out? How committed are colleges and universities to advancing "the best and the brightest" while ignoring other students' desire to succeed? Wiggins (2008) is correct when he asserts that most education is evaluative or grade-driven and not focused on guiding students. If one's goal is to eliminate or rank students, then feedback that shows the student how to improve may be irrelevant. Rather than ranking and eliminating students, Alverno faculty teach for improvement and have not given grades since the early 1970s.

Teaching without grades has created a learning environment that is very different from the learning environment found at most colleges and universities. In a nongraded environment, students obviously cannot be motivated by grades to do well. Grade-motivated students can resort to unproductive strategies for higher marks, such as pleading, complaining, or challenging grades. Such behavior diverts the focus from what should really motivate students: the desire to perform well, strive to be creative, and improve as professionals. A feedback-oriented system also addresses other grade-related issues in higher education. Most professors and students are well aware of the subjective element in the assigning of grades. One professor's C- might be another professor's F. Grades may be assigned for reasons of efficiency by less competent instructors. Grade inflation is also a problem with which higher education continually grapples. Assigning high grades to mollify students, to retain them, or to bolster student evaluations of new professors is well known.

When feedback is given according to explicit criteria and when teacher competency is measured by how well students are being helped through effective feedback, the problems associated with assigning grades are eliminated. Feedback that highlights student success and praises excellent performance is qualitatively better and, arguably, more rewarding than receiving a high grade. Most important, feedback replaces low or failing grades by informing students of their weaknesses and what they need to do to improve. When feedback replaces grades as an important dimension of teaching, the relationship between professors and students is likely to be less adversarial. Students view their professors not as individuals who punish with grades but as sources of high expectations and reliable guidance. Dunn sums up the changes in his teaching as follows:

> My experience of providing feedback has evolved significantly from teaching in grade-based academic institutions to an ability-based system at Alverno. In an ability-based program, feedback is the primary tool in student assessment and requires greater accountability from me as an instructor. Freed from the pressure of giving grades, I must now provide detailed, specific feedback to help the individual student discover her strengths and areas that need improvement.

Teaching Change No. 5: Creating a More Effective Teacher–Student Relationship

When faculty begin to use feedback based on outcomes and criteria and oriented toward student improvement, they quickly realize that their relationship with students undergoes an important change. In the words of an experienced Alverno professor:

> I think feedback is kind of an expression of a relationship. And especially for beginning students who are encountering different faculty with different styles and different expectations, it helps them to kind of know what type of feedback they might get from different faculty, each of whom might emphasize different things. [Faculty] might even have different preferences for what they're looking for around a particular outcome, so this expressing a relationship is very important. Faculty can help students sort through or discern what they're getting from several faculty all at once as they start working their way through the curriculum. It seems to me that from the beginning level, students question issues they're often trying to sort out: *Why did an instructor say my work was level two while I'm at level one? Why doesn't she like what I did?* In this way, you begin to see a pattern of performance. And so in order to have the trust that can make that happen, you have to have a relationship with students so the feedback is a way to talk about and build that relationship.

The process of negotiating individual relationships described by this faculty member is supported institutionally through Alverno's use of a Diagnostic Digital Portfolio (DDP), a centralized mechanism for recording and sharing feedback. The DDP allows faculty access to a range of individual student assessments and feedback, so that learning develops with awareness of previous student–instructor relationships and the feedback given over time.

Wiggins (2008) has suggested that the teacher–student relationship is a "coaching relationship," much like in the world of sports. A coach has a clear understanding of what constitutes effective performance on the field or court and articulates feedback according to a performance goal. The

point is to help the athlete perform in the most effective ways. A coach pays attention to an athlete's unique talents and devises ways to help her reach the highest level of her capability. Teachers in a feedback system operate in much the same way. They try to have a clear idea of the level they want students to achieve, and they continually work with students so that students can reach the ultimate goal. Feedback allows a student to continually readjust on the way toward her goals, much like a developing tennis or baseball player.

According to mathematics professor Pustejovsky, teachers need to look at students as "individuals, each with their own road to travel." To effectively follow students and help them improve by degrees, feedback must be "scaffolded." In other words, feedback must help the student learn how to move to the next successive levels in her use of disciplinary knowledge in any given class over the course of a semester. In this way, feedback can be understood constructively. Faculty and students can learn together in an ongoing fashion rather than in a once-and-for-all way. Faculty can concentrate on what students are and are not doing in order to guide them toward the next level in their development. Adjusting feedback to each student's ongoing needs creates the opportunity for continual growth.

When feedback is a primary way of helping students progress, faculty are put in a position to be thinking about what students will be doing over the course of a number of classes and what the higher levels of their development will be. The student is made aware that individualized, progressive feedback is not a personal attack. The point is to show the student what she has not done well and that she can learn from her mistakes and build as she goes forward. In the words of Jodi Eastberg, associate professor of history:

> I think that when I came here I already had a sense of wanting to meet students where they were. I did not want to hold them accountable or make assumptions about what they knew or could do before they came into my classroom. What feedback has done is it has given me a communication tool but, also, it's a way for me to evaluate where they are. In other words, feedback has given me a way to communicate with them in the place they are at

> when they enter my classroom. Also, part of how I teach is by asking questions, so feedback gives me a place to really fine-tune the types of questions I'm asking directly targeting that student. The kind of questions [that student] needs may not be the kind of broad questions we take to a whole class, but specifically the kind of questions that would develop that student's learning in that moment.

Conclusion

The changes one has to make in transitioning from traditional input and testing to a feedback-centered curriculum are substantial. This chapter shows that it requires a qualitative shift in teaching theory and practice. But the change is well worth the effort. Instructors are presented the opportunity to teach more creatively and effectively and, most important, students benefit from the attention they need and deserve to gain the skills and knowledge necessary for a meaningful profession. In the words of an education student:

> I've always taken [feedback] thinking, "I know the feedback I'm getting is making me more prepared for what I'm going to do." And right now, on the verge of student teaching, I feel so confident that I can go into a classroom and be ready to teach because all the feedback I've been getting has been, "This isn't a really good strength of yours. How about working on this?" It's constructive criticism. I don't even feel like it's criticism; it's encouragement. It's pushing my thinking and made me feel confident and prepared.

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Chapter 5
Peer Feedback: Building Student Capacity and Collegiality

Mary E. Diez and Richard Runkel

Other chapters in this book address the power of feedback as faculty help individual students see their progress and set their course for ongoing learning. This chapter focuses on peer feedback, examining both the professional discourse in the literature on peer feedback and our own practice of engaging Alverno students in peer feedback. We discovered that the term, as used in the literature, can encompass a broad range of experiences, with varying impact on learners and their learning. In its most narrow sense, peer feedback is commonly described in the literature as a process guided by an instructor who asks two or more students to work together to check each other's work and give comments to the peer partner(s) (Kim, 2009; Liu & Carless, 2006; van den Berg, Admiraal, & Pilot, 2006a). Most scholars agree that the efficacy of such peer feedback depends upon the preparation of students to engage in the activity, including 1) a clear set of guidelines or criteria for gathering evidence and making suggestions (Bloxham & West, 2004; Crinon & Marin, 2010; Liu & Carless, 2006; van den Berg et al., 2006a) and 2) some practice in making the process constructive and supportive for the person receiving the feedback (Fund, 2010; Wilkins & Shin, 2010).

As we probed our own practice, we found that the range of experiences across the curriculum at Alverno opens up the boundaries implied in the narrow definition. For us, peer feedback is part of two larger processes. First, peer feedback supports each student's understanding of the assessment process as a whole and the criteria for effective performance in particular. Providing feedback to others is a key way to internalize and apply criteria that can impact the metacognitive understanding of both the peer and the student. As English professor Mimi Czarnik says, "I think of peer assessment as much an assessment for the person giving the feedback as for the one receiving it." Faculty typically use peer feedback to get a sense of

how students have internalized both the concepts of a course and the criteria guiding a given performance.

Second, peer feedback at Alverno is about creating a culture of classes as learning communities, where students learn to invest not only in their own growth but also in the development of their peers. Faculty believe that for peer assessment to be effective, students need to invest in the development of their peers. Czarnik says that she has her students do a lot of oral feedback because, in interaction, they can refine their comments if they see that the person does not understand what they are saying. This attention to the receiver's comprehension helps the peer reviewer share ownership of the peer's success. Interactive features in a learning management system, such as discussion forums, also support the cultivation of learning communities using feedback. Over time, faculty report that students learn to act the way colleagues do in their disciplines, providing peer review of drafts of articles, for example.

Thus, while assessor feedback plays a critical role in the overall assessment process, peer feedback provides unique benefits. The most obvious benefits are to the individual givers and receivers. In addition, the peer feedback process helps to develop a collegial learning community and provides a way for students (and faculty) to support each other's learning.

This chapter describes how Alverno faculty use peer assessment, explores the reciprocal benefits for students as givers and receivers of peer feedback, and lays out some recommendations for preparing students to participate in peer feedback that supports student growth and builds a culture of support.

How Alverno Faculty Use Peer Feedback

At Alverno and in other institutions, faculty who engage their students in peer feedback use a variety of approaches, from working through one-on-one and small-group interaction in class to using online tools between class periods. Expectations for peer feedback and its extension into the culture of the classroom grow over time, so that classes for beginning students and those for developing and advanced students may look quite different in how they incorporate peer feedback.

Feedback in Beginning Courses

Beginning courses tend to work with the narrower definition of peer feedback, focused on a discrete performance for which the peer assessor(s) provides comments. This feedback can be oral or written, although some researchers have found it to be most powerful when there is an oral component, including via "veedback," or video feedback (Thompson & Lee, 2012; van den Berg et al., 2006a, 2006b). Initial peer feedback can target a specific aspect of a performance through a response to focused questions, or it may address all aspects through the application of a set of criteria. In either case, the peer assessor is challenged to provide evidence to support both reinforcing comments and suggestions for improvement.

Professional communication professor Dawn Balistreri argues that, from the teacher viewpoint, "You have to *teach* peer assessment before you can *use* it." She notes that it can be challenging for beginning students to assess each other's work. Balistreri describes beginning students as tending to make global comments (e.g., "I love it," "It's great," "It's perfect") or to focus on errors — for example, in spelling. She cautions:

> You can't be too specific when asking students to give feedback. If you just say, "Read each other's papers and give each other feedback," it's a waste of time. So looking at one or two things, and asking the peer reviewer to provide evidence, is really important.

To help students address the criteria in a beginning integrated communication seminar, Balistreri asks students to respond to a set of questions about a peer's work, targeting key criteria. She says that this practice helps students look carefully at the other student's work. Her intention is to build skill so that students extend this careful analysis to explore possibilities for their own work. For example, in an assignment in which students are asked to analyze editorial cartoons, the following three questions guide the peer review of the writing project:

- In setting context, did the writer provide a clear argument about editorial cartoons and audience? If yes, provide an example.

- In supporting her ideas, did the writer use sources, including an article and interview responses? If yes, provide an example.
- Did the writer analyze a cartoon to support general statements? Provide evidence.

These three questions are expressions of criteria, so the responses both provide feedback to the student whose work is being examined and reinforce key expectations for the student serving as a peer assessor. Because this course is for beginning students, Balistreri first collects and reviews the feedback, often using tools available through the college's learning management system; she wants to make sure that "nobody says anything inappropriate or too harsh." Rarely — twice in 28 years — has she had to withhold feedback.

For many faculty, disciplinary context makes a difference in how initial experiences in peer feedback are developed. In a course in which beginning graduate students give short talks focused on an analysis of how their philosophy of education has changed over time, I [Diez] invite all students to participate as peer assessors. I always start by having the peer assessors identify aspects of the performance that provide positive evidence related to the criteria. Doing that helps the student receiving the feedback see what s/he did that was successful and how others perceived it as positive. Then I ask the peer assessors to make suggestions for the next time the student has to give a talk: *What would help make the performance stronger?* This focuses any negative feedback on the future, creating a positive and supportive context that begins to build a culture of support.

Because public speaking is a point of vulnerability for many people, providing a balance between positive evidence and practical suggestions helps build the confidence of the student receiving the feedback. But it also engages the assessors in developing careful habits of both grounding their comments in evidence and seeking to support the other through constructive feedback. Thus, emphasizing that feedback needs to be constructive is also a way to build expectations that students use peer feedback to support each other, to help each other improve as professionals. That, in turn, contributes to a sense of community in the class and in the program.

Professional communication professor Joyce Fey describes a set of concrete steps for building beginning students' skill in peer feedback in a writing class. She uses a handout called "Giving and Receiving Feedback (without it turning into a brawl)" (see Figure 1). This handout sets the stage for working with a peer, whether as the feedback giver or receiver. Then, for a series of six different assignments, she scaffolds the development of peer feedback, having student peer assessors focus on specific elements in each assignment and using different forms of interaction, oral and written. Fey describes her process this way:

Figure 1.
Guidelines for Peer Feedback

PCM 130 Writing: The Editing Process

Giving and Receiving Feedback (without it turning into a brawl)

Giving and receiving feedback is one of the toughest parts of growing as a writer. It is essential to the process, but it can feel like someone hit you with a truck if it's not done gracefully. The following tips should help you give and receive feedback with elegance and humor.

When giving feedback, always remember what your job is:

1. Your job is to provide developmental feedback.
2. Your job is to support what the writer has done well.
3. Your job is to use criteria as the basis of your comments.
4. Your job is to substantiate what you say by pointing to specific places in the text.
5. Your job is to be honest, yet kind.

1. Your job is not to rewrite the paper.
2. Your job is not to impose your style on another's work.
3. Your job is not to point out every single perceived flaw.
4. Your job is not to gloss over significant problems.
5. Your job is not to assign grades or levels.

When receiving feedback, always remember what your job is:

1. Your job is to listen carefully.
2. Your job is to separate your emotions from your work. These are different entities.
3. Your job is to be willing to give credence to another's opinion.
4. Your job is to be willing to accept what you believe is useful feedback.
5. Your job is to ask for clarification.
6. Your job is to accept responsibility for your work.

1. Your job is not to defend (but to explain if you think your reader is unclear about something).
2. Your job is not to argue with your reader.
3. Your job is not to perceive feedback as an attack.
4. Your job is not to change your work entirely to suit your reader's taste.

> In their first assignment, students write a TV review on any TV show of their choice. They're supposed to have two parts to it: they describe what went on in the show and then they evaluate it. They're usually pretty good in the description part and not so good on the evaluation because it requires analysis. For the peer assessment, I have them work in small groups of four and they each take a turn reading their review out loud to the others in the group. I do that for a couple of reasons — first, they catch errors better if they read it aloud and, second, they begin to *own* their writing and realize that writing is something to be shared, not just a personal experience.
>
> There are guidelines for them to give peer feedback. Sometimes I have them discuss all of the guidelines and sometimes I focus on just a few: *Is the subject defined clearly? Does the reviewer's evaluation come across clearly? Does it seem balanced? What suggestions would you make to strengthen the review?* I usually have them start by telling their peer one thing they thought they did well and one thing they could do better when they revise it.

Fey goes on to describe the other five assignments and how she builds a careful step-by-step process of learning to give feedback. For example, for the second assignment, the peer reviewer reads the draft of a profile that the student has written of a person she finds interesting. The peer gives oral feedback and the student writer takes notes on what the peer is telling her. Again, the peer is guided by a set of questions linked to criteria for the assignment. The receiver in this case is learning to attend to feedback by taking notes, as a way to focus through listening. As the handout in Figure 1 points out, "Your job [as a receiver of peer feedback] is to listen carefully." However, recent research suggests that this process can also be supported through faculty and student use of educational technologies like screencasting to facilitate giving and receiving feedback on writing assignments (Thompson & Lee, 2012).

In the third assignment, a technical writing "how to" piece, the focus of the peer feedback is on clarity — specifically, on how well the peer assessor can follow the instructions, step by step (and, if the steps are not clear,

how well the peer assessor can address what might be helpful in reworking the instructions). Again, the feedback is oral, in an interactive setting. Across the other assignments, peer assessors begin to provide more written feedback, still with guidance from a set of questions intended to ground their feedback in careful analysis, emphasizing concrete evidence. Fey notes that "as their analysis and writing skills improve — both from the writing assignments and from the peer feedback process — they are able to be more effective in writing peer feedback." Her care for building the skills needed to give and receive peer feedback, as well as the dedication of instructional time and appropriate technologies, leads to these good results.

Feedback in Advanced Courses

As faculty talk about students with several semesters of practice in giving and receiving peer feedback, they note that these students are aware of the power of feedback — whether given by instructors or by peers. English professor Mimi Czarnik, describing an advanced group of students, says, "They often ask for more. They want more specifics because they recognize the value of feedback to help them improve." She also notes the relationship between peer assessment and self assessment, describing how peer feedback improves self assessment. According to Czarnik, "Ultimately students have to sit down with themselves and figure out what is applicable and useful [in peer feedback] and what is not."

Physical science professor Heather Mernitz describes her use of peer assessment as a way to build skills important to the profession. She asks students in a biochemistry course to share their lab notebooks with peer reviewers after they have finished seven of ten experiments. The feedback of the peer reviewer helps each student revise her prior work and guides her in completing the last three reports before turning in the full set of reports to faculty. Mernitz gives feedback to peer reviewers as well as to students on each lab notebook. Reflecting on the importance of this process, she says:

> That's a big piece of our profession, because we do need peer reviews and we do need editorial boards. I have noticed that students in their peer reviews write things like, "I really like the way you treated accuracy and precision, and I noticed that you gave statistical measures at the end of each lab report. I really like

> this and I'm going to do this from now on." So I do think that they are learning something from each other, but I think what they learn varies depending on who the student is, how much time they put into the work, and how much they internalize what they are doing.

In another advanced course, Mernitz has her students write to a particular audience. The students in this case write a journal article in which

> they pretend they are the first people who have discovered a particular enzyme. . . . I give them instructions for authors from the *Journal of Biological Chemistry* and they have to prepare a manuscript. . . . They review each other's manuscripts, modeling the process of actual peer reviews in the field. The process shows the functions of scholarly literature and the responsibilities that scientists have to be specific, helpful, and fair.

In both examples, Mernitz identifies a key impact of incorporating peer feedback: the papers submitted to her are much better. "When papers come in to us, we don't see all the problems," she says. "We don't spend all of our time as editors, but can look at the content."

Ertmer et al. (2010) found that the use of online discussion tools can be effective in peer feedback on developing ideas, as students post responses to discussions and make specific comments on others' posts. Alverno faculty report that they are increasingly using discussion tools in the course management software Moodle, as well as other specialized tools, to have students provide peer feedback. Some faculty have students respond to work posted by one to three other students, again using questions based in criteria for the assignment. Others provide access to Google Docs, a shared online word processor, to jointly edit a presentation and comment on each other's work; again, this models professional practices in which multiple authors contribute to a scholarly paper. Teacher education professor Desiree Pointer Mace uses live video (Google Hangouts) for peer feedback in a student teaching seminar. The peer feedback in this case is focused on sharing ideas about how to improve teaching practice.

Benefits to Students in Taking on the Assessor Role

One of the key factors in student development in an ability-based program is the guidance provided by meaningful criteria (see Chapter 2). When an individual student uses criteria to examine a peer's performance or to engage in a discussion about work in progress for which she or her group is offering feedback, she has an opportunity to deepen her metacognitive awareness of the criteria through their application in a specific case (Kim, 2009). As both Alverno faculty and other researchers point out, engagement with the criteria in the peer feedback process invites students to pay closer attention to what might count as evidence (Bloxham & West, 2004), to raise questions about how the criteria apply, and to grapple with how to express their feedback so that it will provide the most help to the student whose work is being reviewed. Some even suggest that the peer feedback process helps deepen understanding of criteria more than the self assessment process, because the emotional attachment to one's own work can sometimes interfere with clearly seeing how criteria apply. Without the emotional attachment to her peer's work, the student may be able to apply the criteria more effectively.

Some faculty suggest that learning to give peer feedback builds confidence in students, as they see themselves able to find evidence, raise questions, suggest improvements, and engage others in setting goals for their growth. As Balistreri describes it,

> I think the bigger benefit is for those giving feedback. It's an analytic process. They're having to read someone else's work and it's like a reading comprehension exercise. I'm reading this article — for context, for thesis, for evidence; so it's deepening my understanding of those components. Or if it's a listening exercise, I'm listening for themes, for evidence, and I'm making connections to something I know. I think it helps the peer reviewer a lot, just in building greater understanding of how we write, how we speak, how we develop a presentation, how we create a storyboard, how we use evidence.

Clearly, in this example, key benefits to the peer assessor lie in the practice with analytic thinking about the process of writing, speaking, or creating a piece of work.

Other faculty note additional benefits for peer assessors, because the process helps them to see others' work as valuable and builds empathy between and among students. Moreover, seeing how another person approaches an assignment may open up possibilities for the assessor's own future work, as students get a window into how performances on the same assignment can differ and yet be equally effective. Czarnik, reflecting on this point, says, "It's good just to see someone else's work. I've had students say, 'Oh, I didn't realize I could write more' or 'I didn't realize transitions are so important' or 'This is a really engaging introduction; I'm going to try to model it.'"

Finally, research in peer assessment provides some data on the power of all these factors in helping the peer assessor grow and develop. Crinon and Marin (2010) found that those giving feedback progressed more than those who simply received it. The Alverno faculty perspective is a bit different, because our practice is to make the peer feedback process reciprocal. But even so, as noted above, faculty do reflect on the clear benefits of having students take the peer assessor role.

Thus, arguments for peer feedback from the peer assessor's point of view suggest that the experience expands students' understanding of criteria. Both peers build their metacognitive sense of the meaning and function of criteria and their confidence in their ability to use criteria to provide help to others. And both increase their respect for each other's work and gain empathy for the growth processes of others. Peer feedback opens up new possibilities for optimizing the use of a good set of criteria. The peer relationship offers particular power in reinforcing the value of multiple views in the interaction of criteria.

Benefits to Students in Receiving Peer Feedback

The professional discourse related to peer feedback suggests solid benefits for students receiving peer feedback as well (Gielen, Tops, Dochy, Onghena, & Smeets, 2010; Sayed, 2010; Wilkins, Shin, & Ainsworth, 2009). Gielen et al.

argue that student assessors can sometimes make criteria clearer for the receiver or provide suggestions that tap into the developmental readiness of the other, a position supported by Vygotsky's (1978) discussion of the zone of proximal development, in which the best assistance is often from another learner who is just beyond the learner's current state. Wilkins et al. found that including peer assessment made learning less stressful for students, compared to receiving only faculty assessment.

Alverno faculty report that peer feedback does increase students' ability to understand feedback and also to be open to experiencing the process as one of improving their work while retaining ownership of it. Over time, faculty document that students who engage in peer assessment not only become adept in the process of giving and receiving feedback but also seek it out as an essential part of their learning process.

While many Alverno faculty point to the value of interactive and oral feedback, others suggest that having written feedback provides the opportunity for students who receive it to go back and reread and reflect on it. Czarnik, who uses online, chat-based interaction, says that technology can provide the benefits of both interactive feedback and a documented record: "People can refer back to transcripts for evidence, which can be helpful, as oral feedback sometimes isn't retained." Digital transcripts, audio files, video files, collaborative websites, and other communication technologies all offer pedagogical resources for faculty and students.

Gielen et al. (2010) also argue that peer feedback can increase the frequency or amount of feedback, providing students with additional supports for learning. Clearly, many faculty who work with students struggle with the amount of student work for which they can provide feedback. And peer feedback, especially early in the development of a paper or project, can benefit both the student and the peer reviewer while relegating faculty responsibility to later draft(s). For example, Berger (2003) describes the process of students going back to a peer feedback group and, over time, clearly using the group's feedback to improve and refine performance. His students, who experience interaction on as many as ten to twelve drafts, indicate that they can see their product improving each time from the feedback of peers.

Other studies have documented the relationship between peer feedback and improvement in performance (Sayed, 2010; Wilkins et al., 2009). Wilkins et al., for example, found that student teachers experienced peer feedback as "helpful in improving their teaching and reflective thinking" (p. 88) and that they "gained insight about their own teaching by observing their peers' teaching and by providing both written and oral peer feedback" (p. 89).

This study resonated with Alverno students. In a focus group, a teacher education student said,

> Peer feedback builds stronger relationships and better communication between me and my classmates [in education]. They would watch videotapes of our fieldwork teaching, and they would give feedback: "I like this strategy you used"; "How did you come about creating that lesson?" Things like that are important to me because it's going to make me a stronger teacher in the end. I love getting peer feedback. I feel you learn better from people you can relate to. Sometimes you just can't relate with the professor, but to hear from a peer, you think, "Wow, they know what I'm doing/thinking." You learn a lot better from your peers and I enjoy doing peer feedback.

This student reinforces Vygotsky's notion of the zone of proximal development and its impact on learner understanding. A physical science student discusses the student's point of view regarding the peer feedback process using lab notebooks described earlier:

> In one class we do a lab notebook peer review. Over a weekend we exchange notebooks with a person and they go through your whole notebook and give you a review. I like that a lot . . . because you can see maybe one area you didn't do so well, but then you see someone else's notebook of their procedures and setups and you get new ideas and ways you can improve on your notebook.

This student's comment reinforces the reciprocal relationship between giving and receiving feedback in work with peers. Thus, even though we separate the two here, at Alverno they work in tandem.

Building a Culture of Collegiality and Support for Learning

These last examples highlight the benefit that peer feedback, especially when integrated in the processes of a course for both beginning and more advanced students, promotes reflection and collaboration. This practice of collegiality supports students' development of skills for their future professional work. As Fund (2010) comments, "A co-reflecting environment supports and stimulates professional development. . . . Role interdependence (roles as both donor and receiver) increases the responsibility and contribution of each student in the community" (p. 695).

A caveat given by every Alverno faculty member who shared experience with peer assessment is that it requires developmentally appropriate preparation and guidance. Simply giving students each other's papers and asking them to "give feedback" is not sufficient. Bad experiences as either a giver or a receiver of peer feedback may lead to resistance with any future attempts to engage students in peer assessment.

Research suggests that training is useful in preparing students to give and receive peer assessment (Ballantyne, Hughes, & Mylonas, 2002; Hanrahan & Isaacs, 2001). Teaching students how to do it, modeling the process, and giving them practice are all critical to the process. This is true for traditional processes as well as for approaches using educational technology (Liou & Peng, 2009). Professional communication professor Joyce Fey, whose work was cited earlier, scaffolds peer feedback over six assignments. Not only is she supporting her students' work in her course, she is preparing them to take their skills into their next courses and to continue to grow as peer feedback givers. From the feedback-receiving perspective, other faculty have developed strategies to help students determine when feedback is misdirected. For example, some use a simulated review of multiple pieces of feedback from different sources to have students consider how on-target and off-target feedback may differ. Others provide feedback on peer feedback to both giver and receiver.

It is also important to reinforce the purpose of giving and receiving peer feedback, emphasizing not only present learning but future professional work as contexts. Moreover, Alverno faculty emphasize their sense that

language is important in building both skill and a culture for effective peer feedback that supports growth. When Alverno faculty work with students, we often talk about the term *improvement* as a key focus. Our students need to know that we are all on paths of growth and any given performance is just a sample of our current progress. So peer feedback can help us take stock of where we are and suggest improvements that will propel us to the next stage of development. Czarnik points to building the understanding that performances (e.g., writing, speaking, visual design) are developed for audiences: "Peer feedback is a way to test your work with an audience of one or two. Their responses can help you make sure you are connecting with the audience and meeting their need for clarity, structure, and evidence."

Another teacher education student comments about the sense of community and professional role identities that emerge in creating natural patterns of peer feedback:

> [In] most of my classes I don't think it's been a requirement of the professor that we exchange work. But I've seen it happen naturally. Some of us just completed our portfolios and there is a group of us who, on our own, decided to email each other the links to our portfolios so we could review them and let each other know what we think. It's just something that happened. I don't know if it's the nature of us being teachers and liking to talk about things anyway. Even in my English class, I treat one of my classmates as my "editor" and send her things, asking her to critique them. It just happened.

When what you and your colleagues have worked hard to instill in students becomes something that they perceive as so normal that it "just happens," you know that the process of developing peer feedback is successful!

Recommendations for Faculty Seeking to Begin Peer Feedback

In this final section, we highlight key ideas from Alverno faculty for implementing peer feedback in teaching practice. Within the context of all of the chapters in this book, we first of all note that peer feedback depends upon elements of a teaching/learning/assessment framework. It assumes

that there are clear course outcomes, criteria for specific assignments, and an established practice of faculty feedback. Here are five keys to building a strong practice of peer feedback:

1. *Remember that "You have to* teach *peer assessment before you can* use *it."*
   Teaching students how to do it, modeling the process, and giving them practice are all critical to the process. And scaffolding the learning, a little at a time, helps to build skill. A handout like that in Figure 1 can be useful as well.

2. *Use criteria to guide peer feedback.*
   Begin by translating criteria into questions that cue students to look for evidence in their peers' work. Debrief with students the connections between the questions and the criteria.

3. *Use interactive settings and processes.*
   Peer feedback is a reciprocal process and so interaction is often helpful, whether in pairs or in groups. Interaction can help build empathy and mutuality.

4. *Engage students in reflection on what they are learning from each other.*
   To reinforce the value of peer feedback and to build mutual respect, take time to have students share what they are learning from each other as peer assessors and assessees.

5. *Make links to professional roles.*
   As students move into courses in their majors, model how peer feedback is used in the profession and give students practice in the kinds of peer feedback they will practice as professionals.

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Chapter 6
Student Focus Group Interview

The following is a transcription of an interview that took place on March 12, 2014, with a group of Alverno undergraduate students who discussed their experiences with feedback and assessment.

Interviewer: When talking to your friends and family about your learning at Alverno College, how do you explain how you are doing, both when you are successful and when you face challenges?

Student 5: Well, my mother attended a university here in Wisconsin. When I tried to explain to her that we receive feedback and that I get Satisfactory, she's like, "On a scale of A, B, C, D, where does that fall?" It requires a lot of explanation on how I'm building my character through my coursework and how I'm really expected to meet the eight abilities. Then I have to explain the eight abilities and when I'm not doing too well in a class, I just say, "Well, Mom, I didn't meet the criteria." She's like, "Okay, that makes sense."

Student 3: I think, for me, feedback allows me to be specific, which is very helpful in my learning. Then I can say, for example, "I did really well in the organization of this assignment but my communication wasn't very clear." I think that really helps me to be able to narrow down what I need to improve on and helps me to explain to people my strengths and weaknesses.

Student 2: I think it is a bit challenging to explain how good or how bad you are doing. For example, in my case, my siblings are always coming home to my parents and saying, "Dad, I got an A and I did really well." Everyone is saying, "I got an A or B," and I'm just like, "Uh, I got a Satisfactory." But really, that's good because they ask, "So?" It's kind of hard that we have to go in and explain what an S means and explain the criteria. It's hard for them to understand what the criteria mean. So it's a bit challenging.

Student 1: Whenever I have an assignment, I would just explain to

people what the expectations were and where I met the expectations. That's the easiest way to explain it to people. And I never say I didn't meet expectations; I always say, "This is where I can grow." So that's just the easiest way for me to explain it to my family and friends.

Student 4: I actually convinced my sister to come back to school. She only has an associate's degree, so she is coming back here to Alverno College to complete her bachelor's degree. She's the type of person who has to really study everything out of the book and then do a test. When she started her classes here this semester, she told me, "It's so weird to learn the way we learn here, because you get a lot of real-life examples." Now she gets it. Before, she was really scared to not know what she got. Was it an A or a B or a C or D, or whatever? I think my family gets it now too, since I've been explaining it to them. I tell them it's not about grading; it's about building on skills you keep on getting better at. You have some skills to begin with, but then you build off of them and build some new ones on top of them. Sometimes you do it unconsciously, but it's good when you do it consciously in assessments or performances. I think my family gets it now.

Interviewer: So we're going to ask you to go down memory lane to think about an experience you had with an instructor. You don't have to name the instructor. Think about your first year at Alverno and the kind of experience you had with an instructor regarding feedback, and compare that to your experience with feedback now. Talk about how you got feedback with an instructor early on, and provide an example. How has that changed the way that you are dealing with feedback from instructors now? Think about that for a minute.

Student 3: I think that, for most people, to be able to take criticism is kind of a learned habit. For me to have that specific feedback is more helpful than an A or a B. Those are just very pretty letters and labels. But getting specific feedback was helpful for me to say, "Oh, okay, this is what I'm good at, but what do you mean I need to change this or that?" So it was a little bit hard for me at first. But now that I'm further along in my Alverno career, I find that I thrive on feedback. I can't wait for feedback because I want to know if I am improving or what I can do to improve. Is it just in my head that I did well? With self assessment you get to say, "Yeah, I think I did

this," but with the feedback you also have the professor's opinion. So I think it has become a learned habit and I enjoy getting feedback.

Student 2: I strongly agree that it's hard to take criticism and that it's all about feedback. I think it was a sociology class that I took either my first or second semester that made me realize the importance of feedback. I've always liked writing and I thought my writing was good. I was so sure that it was good writing coming from high school. But, for this class, I had to do a research paper and, according to the feedback, my writing was not so good. I was so heartbroken because I thought my paper was perfect and that it was the best. But seeing all this feedback that showed that I needed to improve this and that, and to read that "It's not APA," etc., I was like, "Oh my God, what is she talking about?" But over the years I've learned that thanks to the feedback the instructor gave me, and all the other feedback that other instructors have given me, I have improved my skills, and not just with writing. So it's good to get criticism. It's a matter of learning.

Student 1: I think you both mentioned criticism. When I first came here, I took feedback as "criticism" of my performance. But now I don't. I just take it as, "This is what I can improve on," and it's just pushing me to the next level. So it's not criticism. Seriously, when I got back the first paper I turned in, I was thinking, "Oh my God, she totally critiqued everything I did and it's all horrible." But then I realized, "Oh wait, for next time, this is what I can do to improve."

Student 4: I think, yeah, it's the same for me. It's a little different to get used to feedback from your instructors and just be like, "Okay, what is this? A through C or 1 through 4 or whatever?" But I think it really helps you to pinpoint specific things that you need to work on. You learn to say to yourself, "Oh, this was good but in this part you need to add more and in this part you didn't say enough." And now, even my instructors are like, "Oh, I'm not going to tell you how many pages to write. I'm just going to let you write and then you determine what's enough." I understand now when and where to expand and write a bit more. I think that helps me in writing assignments, but in other projects too. It helps me determine what we are focusing on and what I am trying to explain. It's very helpful now.

Student 5: I agree with everyone but, [Student 2], you brought up a good point about not looking at feedback as a critique. I took a required communication class and I got the opportunity to skip over another communication class, so I'm like, "Oh, yeah, I'm pretty smart. I can write." I got to the class and this particular instructor had us write an editorial. I wrote all night because I wanted to practice law. This is my thing and I can write about my position. So she gave me the paper back and was like, "No, this isn't what I'm asking for." I was dumbfounded: "What do you mean? I worked on this all night." Instead of just giving me the feedback and telling me "This is what I want; try again," she sat next to me at the computer and told me at what points she felt I went overboard and what points to expound upon. I really appreciate that feedback moves from "critique" to instructors really knowing your potential. So when you turn in something and they know who you are as a student, they can say, "Umm, no, this isn't you" and you know you can do better. "Let me show you right here and tell you how and where you can do better." And now, because I am graduating in May (yes, I'm graduating in May!), I'm going back on the DDP [Alverno's Diagnostic Digital Portfolio] and reading old feedback and thinking, "This is the student I was and now this is the student I've become." And look where I can go when I leave Alverno. I'm excited about feedback. *[Laughter]*

Interviewer: If I could just follow up on that briefly, and you don't all have to answer this, but have you seen a difference in the way you are getting feedback in your major compared to what you got in a general education course (like Sociology 101)? Is there a difference?

Student 1: Definitely! I'm an education major. I can talk about a certain instructor whose attitude is always, "You think you have it down? Nope, here's the next level." If you turn in a lesson plan or a paper and she doesn't make you revise it three times, there is something wrong. So compared to my first communication class here, where it was like, "Here you go" and "Here is the feedback for next time" and you didn't really have to make the revisions on it, it's constant feedback, pushing you to that next level.

Student 5: I really get it as a philosophy student. I think, when you are in your general education classes, it's just general feedback. So they give

feedback like, "This isn't long enough" and "Where is the thesis?" and "I need you to really go in depth" and "You are paraphrasing your summary." In your major classes or final semester, feedback is more specific, like "How are you incorporating the ideas of your department into this paper?" And especially when you are planning to go into graduate school after this, instructors are like, "Okay, you got it, but I need you to push further and go deeper. How can you make a connection with the discipline theories we've learned so far?"

Student 3: I feel the same way and, at this point, you've named a specific instructor and I can too. They know you. When you get into your departments they really get to know you and they get to know your strengths and your weaknesses. They do really push you to go deeper and be thorough. They kind of know areas that you are lacking, so it's really helpful to get that feedback and to know also where you are improving. It is really helpful that they push you to go deeper.

Interviewer: Thank you. That was very helpful. So tell us about a time when feedback had an impact on your learning or helped you with a learning breakthrough. If you want to, you can do this through a story. You know — a beginning, middle, and end. If you can think about an event with an instructor who gave feedback that finally made things click, it's like, "Ah, this is what you mean" or "This is what I haven't been doing," etc. Feedback fills in the story for us.

Student 4: I can see my paper being revised with the little boxes and comments next to it. I don't remember which class it was, but I do remember that the instructor kept telling me that "Oh, I like how you put in your personal experience" or "I like that you mentioned something that you personally relate to." I think that going into math and education really helped, and I think it really clicked every time in education class when we talk about making real-life examples for your kids. But until you can make those connections, you really don't get the learning. I wish I could go back to my first year and learn the way that I do now. I wish this was the type of mindset I had the first, second, third year, so that I could take in so much more and relate ideas to each other. I wish I could take a certain class again and redo everything. I think, yeah, I know what I'm doing now. But it just

clicked for me that I'm not only learning the content in class with the skills that they teach you, but also how it affects you, or how it affects somebody that you know or how it affects your personal circle. I just think that it's important to do the same yourself for your students as you become a teacher and make students feel the same way — that they can relate the lesson content to something in their lives.

Student 5: I have a different kind of story. Last semester I took humanistic existentialism with an instructor I've had multiple times. And I turned in a lot of work to her in previous classes. She would give it back and she'd say, "Okay, you need to dig deeper. I really need you to press this issue that you have and work it out through your writing." I just couldn't understand what she meant by that. I'm like, "I'm saying what I feel. What do you mean, 'work it out through my writing?'" So she assigned a specific paper that was related to a movie called *The Lives of Others*. We watched the movie and she gave us this long assignment and said to us, "I want you to relate it back to a specific philosopher." So everyone was like, "Aw, I don't want to do this. You want us to do this *and* read a book?" So I went and I really tried to work on the paper but it wasn't flowing for me. I worked two days and through the night. So that morning I got up at 4:00 a.m. and the class was at 1:00 p.m. I worked all the way through, no lunch or anything. I went to class, handed in the paper, and just left it there. Because I'm thinking, no matter how it is, she is going to give it back to me to revise. I'll be okay with that because I didn't really understand what she meant by "work it out through the writing." The next class, this instructor sat in front of the class and said, "There is a paper I want to read to you. I feel like this person got the whole idea of what I wanted you guys to do by making connections." She read my paper and I started to cry because I felt that she is a tough instructor. I think she really likes it when she has a connection with you, so she really pushes you. I felt like, in that moment, I had taken everything that she had told me previously and worked it out through the writing. I had immersed myself in the theory. I worked hard on that paper and I did exactly what she wanted me to do. It was in that exact moment that there were firecrackers, fireworks, and all kinds of shooting stars. I felt like, "I got it!" I felt like I could conquer anything from that moment on. It was a pat-yourself-on-the-back moment.

Interviewer: Well, that's going to be hard to follow up *[laughter]* — you know, fireworks and all.

Student 3: Just recently in one of my art therapy classes, one of my instructors was talking about making therapeutic art plans, which are similar to lesson plans for education majors. She was asking me in the class, "Where are your theorists, the support? Where are your frameworks in these therapeutic art plans? What are you guys thinking?" She said, "If you don't have a framework, you aren't basing this off theorists. What is this for? You're not doing therapy for these people for entertainment; you're not there to give them a fun time." She said, "You are there to help them grow, build, and meet outcomes." It struck me, and I thought, "Oh yeah, I have all this knowledge that I've gained over the years about frameworks and theorists and information but what am I doing with it? Where is it going?" It just struck me and I looked at my therapeutic art plans in a whole different light. I feel going forward that I can make more effective therapeutic art plans. I was lacking these before. I didn't know what was missing and it dawned on me, "Oh yeah, that's important." So now I feel like that was some really incredible feedback.

Student 2: I had a similar experience with theoretical frameworks. I used a theory in research class while writing a proposal on how to communicate with mentally disabled patients. It was about what to do and what not to do. I had to come up with several frameworks, including my *own* theoretical framework. I was so scared and wondered how I was going to do this. I was confused and didn't know what to do. I came to the point where I thought I was going to fail the class. However, after my instructor gave me feedback, we sat together and looked at the paper. She would say things like, "This is how you have to do it" and "This is how you have to look at it" and "If you do this it will turn out better." I did exactly as she said and looked at it from a different perspective. I sat back and I thought, "Those points will give me this or that and this is how it will help other people." Taking her feedback and looking at it from a different perspective definitely helped me come up with my own theoretical framework. And I got it!

Student 1: In the course everyone has to take to officially be a School of Education major, I did the initial interview focused on the education

standards. I thought I demonstrated them but left crying because I thought I totally messed up. I felt I didn't know what I was doing and that I'd never be a teacher. I took the feedback they gave me and wrote a required paper. The feedback that stood out made me think about how I can connect certain standards to what I do in the classroom. I had to ask myself, "Why are you teaching the way you're teaching?" and it just clicked when I wrote the paper. I can say I taught any given lesson for certain reasons and that student learning relates to the course frameworks. I'm serious! As you said, [Student 5], it was like rockets going off. I thought, "Oh my gosh! I totally get why we do this now." So, yeah, I left crying the second time, but because I was really ready to go for it!

Interviewer: That's great! There's a lot of laughter and tears of joy here. You know about self assessment, right? We do a lot of it at Alverno and it's part of the feedback process. Students should be assessing their own performance before they get feedback from the instructor. We're interested in knowing a time when the self assessment and feedback that you got worked together to improve your learning.

Student 4: I can think of one time when our instructor was helping us with the construction of our lesson plans. She was explaining the difference between a goal and an outcome. At the time, I really didn't understand it. I wrote in my self assessment that I didn't know if I was distinguishing correctly between the outcomes and the goals. I got them mixed up. When I got my feedback from the instructor, she said everyone was having trouble with distinguishing between goals and outcomes. She had us write five sets of goals and five sets of outcomes until we understood it. I figured out what I was doing wrong. That really helped.

Interviewer: It sounds like she realized from the self assessments that it was something that had to be adjusted for everybody.

Student 4: I thought that the other students were confident and so I didn't ask any other questions. I just thought I would try to see if I was correct. But I think she noticed that when she read everyone else's unit plans, they weren't distinguishing between goals and outcomes. So she went back through it in class. She just agreed with me that I wasn't doing it correctly.

Student 3: Let me start off by talking about one of my weaknesses at the beginning of my time here. You know, Alverno is a performance school. You really have to demonstrate your abilities and a lot of it is based on speaking and presentations. One of my weaknesses from the beginning was speaking with a small, high-pitched voice. I'm really a quiet speaker. It was an uncomfortable thing for me. It happened in my field placement a lot and when I was working with people. Sometimes, if I am uncomfortable, I tend to take on that smaller voice. I don't mean to and most of the time I'm not really conscious of it. My instructor was watching me on a site visit while I was working with participants. In my self assessment, I said, "You know, I think I could've used a stronger voice." In her feedback, the instructor asked me to think about why I had a quiet, higher-pitched voice in these situations. It really made me think about it. So now when I reflect on why, that helps me be more comfortable. I guess I wasn't speaking up because I'm like, "Oh, I'm uncomfortable" or "This person is making me feel this way." I realize it's because I was scared. The instructor's feedback really helped me a lot with this.

Student 2: I can think of another example. I'm a Spanish medical interpretation student and I'm going into a translating class. We had to write for the community and I translated from English into Spanish. It was a really big document. I like my writing and I think it's really good, but this was my first time writing in formal Spanish, even though I'm fluent in Spanish. I know Spanish, so I can write, right? No big deal. So I write it up and thought it would be fine. But when I got the feedback, I realized I should have gone over it, taken my time with it, revised it, asked for help, and gotten clarification.

Student 5: I'm going to take a leap and use an example from my internship. I'm interning at a nonprofit organization that mentors young girls in the community. I applied for the internship because I have previous experience mentoring inner-city youth, from 12 to 18 years old. When I got the position, she told me I would be working with sixth-, seventh-, and eighth-grade girls. I'm like, "I have experience so this will be nothing. I got this." That was my self assessment of myself at that time. So I went to the internship site and the first night they completely ran over me. I consider myself to be a disciplinarian. You know, "Sit down and be quiet," and they

got that part. But I feel like they didn't really receive the philosophy of the organization and what it's really built around and meant to do for them. They got the disciplinary part, but they didn't get what they were supposed to go home with. So I had to go home and self assess again and say, "Okay, how can I approach this differently so they understand that they need to be respectful and understand what they are supposed to do?" So I guess that example goes outside of campus and shows how you, as an Alverno woman, are constantly doing self assessments, getting feedback — whether it is direct or indirect — then reassessing yourself. I'm like, "Okay, I've received the feedback, now how can I use that to really build upon what I am supposed to do, wherever my job or internship is?"

Student 1: For me, the best self assessment is when you are teaching and when your instructor is watching you and having that conversation about what went right and wrong: "Did you notice that little Gracie was not even paying attention to what you were doing?" There have been times, especially in my first couple of times teaching, when I think, "I got this and they all are going to get it and understand the outcomes and it's going to be perfect." But afterwards, you're like, "No, this didn't go the way I expected it." And having that self assessing conversation right then and there, and then getting that instructor feedback right then and there, has always been helpful to me.

Interviewer: Has there been a time (and I think some of you may have mentioned this) when your self assessment doesn't agree with the instructor's feedback, though you're pretty sure that you are right? What do you do in that situation? Do you talk to the instructor? Or do you ignore it, like, "Oh well, they don't know what they are talking about." Have you ever had that conflict?

All students: Yes . . . *[Laughter]*

Student 5: I'm living that conflict right now in a certain class. I'm wondering what more the instructor wants from me. I'm self assessing and I think I get a certain concept, but then, I'm in a class that challenges me to apply the framework of my discipline. I'm thinking, "Okay, look, I'm getting ready to graduate, so I understand my discipline." But the instructor

says, "I think you should approach this differently." I'm like, "What more do you want?" I'm taking a lot of what she is saying and I'm thinking, "Okay, you did do that, but let's see what she means by maybe approaching it differently. Let's try to use that approach and try to get where she wants me to be." It's a never-ending battle when you really feel like you know something but the instructors are telling you to take a different perspective.

Student 4: I'm always trying to take my instructors' feedback because they know what we need to do. They've seen tons of students go through what I'm going through — maybe not exactly — but they have seen students going through struggles where they think they have gotten things right, but really didn't. I think it's very helpful to go ahead and get that feedback all the time, even when you think you're not wrong, because it challenges you. It makes you ask, "Is this really the right way or can you see it multiple ways? Can you have multiple views on a subject or project?" In real life — a phrase I don't like because everything we do is real life — when you go outside of Alverno you'll always need to self assess, even if you are doing the same day-to-day office job, or whatever you're doing. You are never going to encounter the same people and you're never going to encounter the same situation. You are going to have to find a way to deal with people and events and self assess. You'll say, "Okay, this is something I haven't dealt with. There is something I don't think is right but how can I try to understand it?" I think that it's really good that professors challenge us. If I think I really am right or that the instructor is wrong, it would be a very big growing point to get their feedback, because they have a very different view on things.

Student 3: I had an experience with an instructor where I thought she was relentless. Every assignment I got back was just filled with very critical feedback. I was even questioning myself after a while. I wasn't getting what I was doing wrong; I just didn't understand. Then I realized that no, I do know what I'm talking about, but that is just her way. She isn't going to accept fluff. Maybe she is just trying to push me by giving me that critical feedback. To me it felt like I was being attacked. I wanted to tell her to please relax, but maybe that is just her way of helping me move forward. It made me think that I'm not speaking her language. Maybe I'm not communicating my thoughts clearly enough in a way that she understands. Something might make sense to me. I know what I'm thinking but

maybe she can't read my mind. Maybe she isn't getting what I'm trying to communicate. So it works two ways, I guess. I tried to take her feedback and go on with it, even though, sometimes, I didn't really agree. There is something always valid in criticism.

Interviewer: Thank you. You are amazing women. We appreciate you coming here to do this. Would you mention your discipline? We didn't get a chance to do that. Just for the record, please just say what you are going to be doing.

Student 1: Early-childhood elementary education with a support in English language arts.

Student 2: Professional communication and supports in psychology and Spanish/English interpretation.

Student 3: Art therapy.

Student 4: Mathematics major with a secondary education support (which should also be a major because it's just as much work) *[laughter]* and a support in Spanish language and cultures.

Student 5: Philosophy major with a support in religious studies and the elective studies option.

About the Authors

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