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Introduction

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Words from our students suggest metaphors that capture the significance of self assessment. They are typically references to sight: *Self assessment enables me to see how I've grown...see where I stand...look at my progress...see where I've come...Self assessment opens your eyes.* In these statements, students catch the element of conscious awareness. Their further descriptions pinpoint the complex nature of that awareness: *It's knowing inside myself...It's looking at how I'm doing from another perspective...from such a distance that I can be honest.* Thus our students recognize that self assessment is at the same time internal as well as external. In naming the view, they recognize that self assessment is a process as well as a mirror image: *It gives you a constant reflection of your performance.*

Students are adept at articulating, in their own words, the purpose of self assessment as they have experienced it: *It helps you improve your performance...to grow...to learn...to better yourself...You're trying to do something to change the way you work.* Our experience at Alverno has been that self assessment also assists a student to see her work as an ongoing source of her learning as well as its product. In the process, self assessment reinforces its significance by becoming a major source of her commitment to improve.

Incorporation of student assessment and consequently self assessment into the teaching/learning process has led Alverno faculty to confirm that significance. We have found that a student can learn to understand and evaluate her own performance, see its relationship to her own knowledge and abilities in all their complexity, and take charge of the improvement of her learning in an informed way.

Beyond individual improvement of learning, self assessment, as recently pointed out by Angela Brew (1999), is one of the important areas for the development of two skills especially crucial in today's environment - - discrimination and negotiation. The presence of the Internet and the fact that knowledge itself has become the subject of critical debate make the skills that constitute discrimination increas-

ingly necessary. Growing encouragement and determination to more humanely resolve conflicts in relationships — from global to individual — require that students learn negotiation skills. What practice better than the formal use of self assessment to enhance the development of these skills?

Approaches to Self Assessment

The significance of self assessment is emphasized in literature on experiential learning, writing, reflection, professional education, education for work, and adult education. Depending on the context, it is defined in many ways and is found in many forms — from journal writing to students' awarding of their own grades. In every case, self assessment is connected with the reflective thinking required for completion of a learning experience and/or with development of self-direction as learners. Boud, Keogh, and Walker (1985) refer to self-assessment as "one aspect of reflection" (p. 39). Heron (1981) identifies self-assessment as one of several "self-determining competencies" (p. 57).

Kusnic and Finley (1993), using the term "self-evaluation" to include the concept of self assessment as we at Alverno define it, identify it as a reflective process with specific components: "Students reflect on what they have learned — describing it in qualitative terms, synthesizing it, making sense of it, and evaluating it" (p. 8). Cowan (1998) implicitly makes self assessment as we define it a form of reflection when he classifies reflection as analytical or evaluative: "Reflection often involves me in thinking how I did something — which is analytical. It can also involve me in thinking about how well I have done something — which is evaluative" (p. 17).

As we work to define self assessment from the perspective of its potential to enhance a student's learning, we increasingly realize that reflection must be an integral part of it. If we ignore or deny that, we find our definition narrowing to an exercise of judgment that is not necessarily informed by understanding.

Our Definition

The definition of self assessment developed at Alverno College comes from ongoing study of the performance of our students. It is related to the way we have defined student assessment. It focuses on performance that integrates knowledge and ability and on articulated criteria as standards for performance:

Self assessment is the ability of a student to observe, analyze, and judge her performance on the basis of criteria and determine how she can improve it (Alverno College Faculty, 1994).

The process of opening up precisely what that definition means has been the object of our ongoing effort since we articulated it — for the sake of our own teaching as well as for student learning. We have studied our experience with student self assessment across the curriculum through samples of self assessment by students and their articulation of its effects, to discover what aspects best assist students to develop their learning, how they learn to do self assessment, how their attitudes influence it, and what role feedback should play.

An Interpretive Framework

One result of our study is a developmental framework — the Alverno Framework for Self Assessment — that we, as a faculty and staff, have collaboratively articulated to guide our students and ourselves in recognizing and seeking to develop increasingly refined self assessment (see Framework following p. 152). We have identified four components or skills inherent in self assessment: *observing, interpreting/analyzing, judging, and planning*. Although these components are not absolutely sequential — particularly in their development, which is an ongoing zigzag — we encourage students to form the habit of *observing* carefully and *interpreting* or *analyzing* their observations before they leap to *judging*. *Planning* seems to follow organically from the other components, yet a student might intuitively recognize the worth of some aspects of her work and continue to refine them without really understanding or even carefully *observing* them. She would then at least partially be meeting the criteria for

planning as a beginning self-assessor (i.e., "Identifies aspects to maintain for performance and/or the process of producing a performance" and "Identifies aspects to develop further and suggests approaches for performance and/or the process of producing a performance").

Although *judging* seems to be the core of self-assessment, we consider it important to separate out *interpreting/analyzing* as a component that emphasizes the reflective nature of self-assessment. We encourage students to probe the meaning of their actions — the sources: the role of intuition, emotion, and attitude; and the process by which they came to understanding or failed to come to it. Doing so, we find, enables them to make more informed *judgments*, to take a process perspective by connecting their current performance to past ones, and to develop understanding that assists improvement. The *planning* component is meant to extend the process forward.

Within our Self Assessment Framework, criteria are laid out in terms of beginning, intermediate, and advanced levels — not as "competencies" to be completely met and checked off before moving to a next level or a stage of completion, but as ways of describing how students might show increasingly insightful and productive self-assessment. In individual situations and often with a degree of consistency, a student might show proficiency in some criteria at a beginning level, some at an intermediate, and some at an advanced one.

Throughout the chapters in this monograph, the writers provide examples of how they have observed students come to fuller understanding of their own performances through self-assessment. They point out patterns of development related to the framework. They describe what they have found in their teaching that needs emphasis to assist students to develop their self-assessment ability in a way that improves learning.

Self Assessment and Self Evaluation

"Self assessment" and "self evaluation" are frequently used synonymously. In our program we do not equate them absolutely, but we certainly use them as overlapping concepts. Self assessment focuses on a performance, whether product or process or both, including attitude as well as action. A student may be assessing a slide show

she designed or her interactive performance caught on videotape. She may be assessing the problem-solving process she went through in her science lab or the paper she produced for English class and the thinking by which she produced it. In each case her instructor tries to assist her to focus on it as something she did on a given day in a given state of mind and feeling with a given set of other circumstances. That explicit emphasis on a specific performance as not necessarily being typical assists us in dealing with a beginning student's tendency to confuse performance with person.

When a student produces an assessing synthesis of her performances across varied contexts and over an extended period of time, we tend to call it self-evaluation. In that case, a student at the end of a semester might look back at the science problem-solving incident or the slide show she designed, not just by itself but in relation to other performances, to find patterns of development and new insights into her learning. Our experience tells us that our distinction between self-assessment and self-evaluation is not absolute, for even when a student is assessing a single performance, we encourage her to view it from a developmental perspective and to look ahead to future strategies.

Self Assessment and Self Monitoring

Several statements in the Alverno framework refer to what we might call self-monitoring. For example, the description of an advanced exercising of *judging* includes:

Based on [a student's] judgments during the performance about the effect of her behavior, she may modify her ideal expectations and maintain or change behaviors. In a culminating self-assessment she evaluates her use of judgment and her modification of behavior during the performance.

Self-monitoring is self-assessment that a student does *during*, instead of *after*, a performance. An education major doing student teaching, for example, might sense that most of her students do not understand a concept they are working at, so she changes her plan and/or her approach. In the following example, a nursing student

Retrospective look at work in relation to each other - identify value of

illustrates how she self-monitored her approach in an interview with a patient and changed it as she went along:

As I began to ask Mrs. T.J. open-ended questions, initially she would give one- to two-word responses. I used general leads, perception checking, and clarifying techniques to get her to elaborate more and to give descriptive answers. . . . She may have been uncomfortable with me due to my age. . . . I was a stranger. . . . I stopped questioning, told what school I attended, my career goals. . . . This seemed to establish a rapport. To maintain this rapport, I attentively listened to my client. I tried to convey sensitivity, understanding, and acceptance of her feelings through verbal and nonverbal language. When I asked her a very personal question, I used normalizing or universalizing about the aging process to let her know why I was asking a particular question. I felt that these measures were effective because they opened and reconnected the line of communication between Mrs. T.J. and me.

In effect, self monitoring is reflection in the midst of action, and it enables a student to make changes spontaneously as a result of doing the kind of thinking on her feet that includes *observing* and *judging*. Self monitoring involves what Schön (1987) calls reflection-in-action (our thinking functions to question and “reshape what we are doing while we are doing it” [p. 26]). The correlation of self monitoring with emerging leadership has become an important focus of many contemporary studies (Kolb, 1998; Ellis & Cronshaw, 1992; Kent & Moss, 1990; Zaccaro, Forti, & Kenny, 1991). Self monitoring — and its correlation to emerging leadership — is related to the self-regulation that psychologist Albert Bandura (1986) has defined as comprising three major levels (subprocesses): self-observation, self-judgment, and self-reaction (pp. 336-337). Because in our framework self monitoring includes “adjusts ongoing action,” it becomes what Barnett (1997) calls going “beyond Schön. . . reflection-for-action” (p. 98). Cowan (1998) incorporates the three concepts of reflection-for-action, reflection-in-action, and reflection-on-action into a model that suggests their potential relationship in a learning process. He clearly distinguishes analytical reflection (or “How should I do it?”) from evaluative reflection (“How well can I do it?”

or “Should I do it better?”) (pp. 17, 66-92). For us, self assessment includes all of these, with reflection-in-action, or intentional self monitoring, being a sign of advanced ability.

In our students, we find that the more self assessment becomes habitual and criteria become internalized, the more self monitoring becomes a possibility and a part of the ongoing process of improving performance.

Self Assessment and Reflection

Self assessment, as it is defined here and in several of the sources quoted above, is a complex, reflective ability focused on the development of *judgment*. Brew (1999) makes a clear statement of relationship between self assessment and reflection:

Self-assessment is usually concerned with the making of judgements about specific aspects of achievement often in ways which are publicly defensible (e.g. to teachers), whereas reflection tends to be a more exploratory activity which might occur at any stage of learning and may not lead to a directly expressible outcome. All self-assessment involves reflection, but not all reflection leads to self-assessment (p. 160).

We see reflection as an important part of self assessment that enables a student to come to informed, refined *judgment* of her performance. From another perspective, self assessment can be seen as a part of reflection. Boud, Keogh, and Walker (1985) make “evaluating experience” a *component* of reflection and they make planning an *outcome* of reflection (pp. 30-36). The essential distinction lies in the *purpose* and *focus*. Both reflection and self assessment depend on careful observation, but the purpose of reflection is *understanding*, in contrast to the *judgment*, the *evaluation of performance on the basis of criteria*, that is the purpose of self assessment.

Boud and his colleagues define reflection as “the total response of a person to a situation or an event” that “leads to new understandings and appreciations” (*ibid.*, p. 19). For us, self assessment is a particular kind of response (an evaluative one) to a particular kind of experience

(performance); new understandings and appreciations are important but serendipitous results.

Because self assessment and reflection can be seen as parts of each other, they share several important qualities that Boud and his colleagues have articulated as characteristics of reflection. The process in each case is "a complex one in which both feelings and cognition are closely related and interactive" (*ibid.*, p. 11). Self assessment shares with reflection a concern "with how the learner works on the experience, links new knowledge with old, reexamines the initial experience in light of his or her own goals, integrates learning into his or her existing framework, and rehearses it with a view to subsequent activity" (*ibid.*, p. 21).

Even the observation of Boud and his colleagues that "reflection does not have to be a solitary activity" is true of self assessment. Like reflection, "it can occur in group settings as well as through individual writing and thinking" (*ibid.*, p. 16). "Individual thinking" can be spoken onto a tape or to a live audience. A group setting can involve a group's assessment of its own performance as well as the sharing of individual self assessments. Group self assessment provides the contribution of varied perspectives in reflecting on how a group interacted, what the participants can learn from the interaction, and how they can improve it.

It seems clear that the qualities that self assessment shares with reflection help make it a significant part of a learning process. For us, self assessment is a precisely defined expression of reflection.

Underlying Assumptions

Beneath our concept of self assessment and the framework defining it are a series of assumptions that emerge from our experience and from our assumptions about learning and assessment.¹

Self assessment as integral to learning

First of all, we see *self assessment as integral to learning*. Learning in our context is essentially characterized by self awareness. We hold that "a student learns better when she knows precisely what she has achieved, how she has achieved it, why she did what she did, and what she can do to improve it" (Alverno College Faculty, 1994, p. 16). Operationally, if a student is to become a better, self-determined solver of chemical or environmental problems, for example, she needs to be self aware of the state of her own learning, including what standards she is set to meet and how well she is meeting them thus far. Our own published research supports this (Mentkowski & Associates, 2000). The research of Bandura (1997) on self-efficacy supports that view: "Perceived efficacy thus contributes to the acquisition of knowledge and development of subskills, as well as drawing upon them in the construction of new behavior patterns" (p. 61). Chickering and Reisser (1993) have found that college students "who are given guidelines for evaluating their own development in specific ways are more likely to have a strong sense of competence" (p. 78). We maintain that effectively developed self assessment skills, based on criteria, assist students to increase the accuracy of their self-perception and therefore help convince them of the authenticity of their *judgment*. From a recent qualitative study, researcher Catherine Marienau (1999) reported findings that indicate strong endorsement of "self-assessment as an integral component of the curriculum wherein students engage in self-assessments intentionally, regularly, and with consistent reinforcement from the program" (p. 137). In summarizing more than 20 studies in *Self Direction for Lifelong Learning*, Philip C. Candy (1991) states that one of the things a person capable of working independently would ideally be able to do is "develop and use defensible criteria for evaluating learning" (p. 130).

In our students' self assessments, we find descriptions of learning taking place. One student's self assessment of a literature paper in progress includes a paragraph that illustrates how self assessment has contributed to her learning:

1. For a full discussion of our philosophy of student assessment and how it relates to our assumptions about learning, see *Student Assessment as Learning at Alverno College*, Alverno College Faculty, 1994. For a discussion of our ability based curriculum, see *Liberal Learning at Alverno College*, Alverno College Faculty, 1992.

I think that I have been on a good course in writing my paper. I just neglected to include myself in my analysis. That has been my most difficult challenge as a student. I am so used to divorcing myself from my work that I have a difficult time incorporating my true thoughts into my papers and other work. I have been in the habit of examining literature outside of myself (or only through the words of critics and instructors) so that I now find it more than a challenge for me to think, write, and speak about literature — here, a play — in my own voice.

This student is at a point at which her self assessment is assisting her to carry her learning beyond gathering information from experts to synthesizing and evaluating the information, articulating her own interpretations, and constructing integrated knowledge. Self assessment enables her to understand what is happening so that she can direct the process more responsibly.

Self assessment as developmental

Like the learning of which it is a part, *self assessment is developmental*. We have found that our students, when they are beginning to develop their ability to self assess, usually “expect the teacher to take the initiative in recognizing their problems and approaching them about them.”² Students express this attitude in various ways:

When I started out, I felt like self assessment was a method that teachers were using so that I could do their jobs for them. And so basically I just kind of left it open-ended. You know, it's like: “I know I did OK, you know I did OK, but how did I really do?”

When I first started at Alverno, I didn't see the point of self assessment. To me it was a waste of time because all that mattered was what the teacher thought of what I did.

Beginning students also “make judgments on their own behavior when someone else points out the evidence to them” and “experience evaluation of [their] performance as general affirmation or rejection of [themselves].”³ One student initially saw the process as “sort of reversed.” “That was the teachers' role,” she said, “to tell us how well we did on something.” And what she said students expected from the teacher was “a validation of ourselves.”

However, some practice in self assessment and feedback clearly related to criteria can assist students to change their attitude. Part of that practice consists of convincing them that they already have some idea of competent performance in areas that have been part of their previous experience and education. In beginning courses like writing, for example, even with traditional-age students, we begin by eliciting criteria that they have learned (even if they have not been able to put those criteria into practice) but that are latent because only the teacher has articulated them. Then we assist them to extend their understanding of what constitutes competence in varied situations. Eventually they “give evidence of internalizing standards of self assessment” and “sense when [their] own performance in a given situation is essentially competent or incompetent.”⁴ Once students develop some foundational knowledge of their discipline and some understanding of what self assessment entails, they can become increasingly sophisticated in probing what they already know and can do and what they need in order to improve. In attempting to describe how self assessment changes as students advance, one student said:

By the time you're in your last year, or last two years even, in your advanced-level studies, the list of criteria gets smaller and smaller because the instructor really expects you to be able to do that for yourself. I've had self assessments where it says, “Assess yourself on this,” and where there were no set criteria [from the instructor] — you know, those specific ones we would get as a first-semester student. So you really do internalize what you're doing.

2. Analysis by the Alverno College Council for Student Assessment from research on Alverno College students completed by the College's Office of Educational Research and Evaluation (Mitch & Menciowski, 1984).

3. *Ibid.*

4. *Ibid.*

All of this confirms our interpretation of self assessment as developmental.

Boud (1991) expresses the defining characteristic of self assessment as "the involvement of students in identifying standards and/or criteria to apply to their work and making judgements about the extent to which they have met these criteria and standards" (p. 5). However, in a later work (1995) he stresses that students need to develop their skills as they progress through their educational program, that because self assessment does not happen on its own, they need systematic practice in it.

Our experience continues to show us that especially in regard to the articulation of criteria — unless students have mastered a subject area or skill experientially — the development is gradual and complex. It can be firm and impressive, but it is seldom steady and never linear. Depending on the context, it can gradually deepen, then move to the surface, then flatten, then suddenly plunge deeper. But the overall pattern is one of growth.

Self assessment based on public criteria

The interactive nature of learning also requires that *self assessment, like instructor and peer assessment, should be based on public criteria for the performance* — "public" in the sense of being explicit for all involved. Criteria, as we have defined them, represent a picture of the ability or abilities demonstrated in a performance. Yet the idea of "picture" in itself is limited by its static nature. The developing of a picture of ability is gradual and ongoing, like a forever-extended Polaroid film that one might imagine constantly refining itself. Part of a student's learning to self assess entails making pictures of ability clearer and clearer to herself, integrating their myriad nuances and varieties and levels of expression. She then can see that criteria enable her to examine how her own performances might reflect an ability, and she can carry a developing picture of the ability into her future performances.

The faculty at Alverno have defined assessment of individual student performance in a way that underlines the interactive nature of the *judgment* process and thus makes public criteria essential to all

instances of it. We see *judgment* as a deliberative process, reflecting decisions about performance, based on criteria or standards applied to relevant data from the performance, and made with a consideration of the consequences. As an interactive process, with the presence of varied perspectives, *judgment* involves criteria that are, in effect, shared mental models. Each assessment situation should achieve a balance between shared mental models and individual views. In self assessment a student achieves that balance by making explicit her understanding of criteria (and the behaviors that define them) and creating an ongoing dialogue with her feedback from instructor and peer assessment.

Shared understanding of criteria makes possible accountability in learning — from student to teacher, from teacher to student, and from student to student. It also assists a student to internalize the self assessment process. She might then better communicate a balanced understanding of her own level of mastery of abilities in a manner that would be useful in settings outside college as well as in the classroom. In response to a question from a visiting educator, one student explained:

You're expected to develop your own criteria and assess yourself from whatever your own criteria are, within the framework of a class. So that I think when you're out in the workplace and nobody hands you a list and says, "Here's what you're supposed to be doing," you know what your own criteria are within whatever the workplace is and you can say, "Yes, I do this well." You make your own list. You make your own set of criteria. You assess from there.

Through self assessment a student can increasingly deepen her understanding of a given ability and what an effective performance of it might look like. Eventually her ability to make informed *judgments* includes the ability to articulate her own criteria for a given performance as well as for ongoing improvement.

Self assessment enhanced by feedback

Feedback by both instructor and peers enhances self assessment for students. Based on a belief that meaningful learning is interactive, a student needs to complete her picture of her own performance by considering others' perception of it. In the same way, an instructor's judgment of a student's performance can be considered incomplete — especially as evidence of learning — without the student's perception of the performance. Brockbank and McGill (1998), while articulating the importance of internal dialogue, also stress the point that without the interaction of thought brought about by external dialogue, "critically reflective learning may not happen" (p. 79). Feedback by instructors and peers can point out details missed by the student, can show gaps that the student herself might automatically fill in, can raise questions that highlight lack of understanding. It is possible to see the connection between feedback, self assessment, and resulting learning from an example of a third-year student in a literature class who, in a final self assessment, was describing important moments of learning during the semester:

In preparing to write an analysis of Othello, I was lost on where to begin. The greatest breakthrough for me was when I reflected on my earlier self assessments and feedback. I realized I should first choose passages and analyze them, gradually moving to the creation of a thesis, as opposed to creating a thesis and searching desperately for evidence to support it. I should let a work reveal itself to me first.

As this student incorporated her feedback and self assessment into her learning, she was creating an integrated process. Her final sentence also suggests that she was learning to alternate analytic action with an open kind of reflection.

Self assessment elicited by multiple approaches

There are many ways to elicit self assessment. Because of the varied nature of learning styles, students should have access to multiple approaches. Especially for the beginning student, the prompts provided by the instructor are ways of trying out approaches that best elicit

self assessment for a particular student in a particular context. For example, for one group of second-year students working to self assess their process in writing an analytic paper in a communication course, one of the questions was: "If your paper is still at a fairly rough stage, *either* What problem do you need to resolve? *or* What will be the next step by which you move toward a refined publishable draft?" Several students answered very literally with on-the-surface next steps ranging from typing their paper to finding some time. Others planned vague next steps like "tossing around" the possibility of a new idea or making the content of the paper clearer or doing some revising. Students who found the prompt more helpful were apt to write something like this:

Next I want to make a map of the issues that I want to address. I want to be able to have a visual of the layers. After that I need to line up my evidence around each issue. Next I will begin my final draft, using my map and evidence to guide me.

In general, we have found that students need to be considerably advanced and/or have time at their disposal outside of class, as in a reflective journal, to find their own entrances into more meaningful self assessment. When we ask them in class to do an on-the-spot self assessment, we find that we can best assist them to move into a focused context by providing them with some questions that suggest direction.

Assumptions about Attitude and Motivation

We have found that a student's attitudes toward self assessment are an aspect that initially calls for attention and development. It may take some students up to a semester or more of experience with self assessment before they begin to see it as an important part of their learning process.

Self assessment initially an indifferent exercise for students

Students often come with indifference to self assessment. They have had little or no informed practice in self assessing; their academic

experience has taught them that it is the instructor's responsibility to evaluate their work. It is hard for them to see a purpose for it. As one student put it, "When I first started at Alverno, I didn't see the point of self assessment. To me it was a waste of time because all that mattered was what my teacher thought of what I did."

Turning such an attitude into one open to self assessment as an invaluable aid to learning entails for all students a gradual growth of trust in their own judgment. It also involves a certain amount of positive pride and enjoyment in what they are able to identify as accomplished or understood.

We have found that it is important for an instructor to understand the sources of students' feelings about self assessment and to assist them to enter the unfamiliar world of understanding their own performance well enough to make informed *judgments* about it. Students seldom find it easy to ferret out evidence of meaning and worth in their performance. Even students who believe they are doing well often base that judgment on a long history of A's and B's on tests and assignments. They see no need to identify evidence, much less learn what such evidence would be based on. In his latest book on assessment in higher education, John Heywood (2000) stresses the responsibility of educators to assist students to develop *judgment* as the highest order skill.

Most students experience an initial challenge in the idea of explicit criteria—that they must understand criteria so well that they can apply them. They must gradually understand the ability pictured by the criteria in relation to their individual performance with enough depth to enable them to articulate criteria for themselves, thus indicating that they have internalized the assessment process sufficiently to enable them to continue learning after college.

Self assessment as contributing to a student's self-confidence

Self assessment assists students to build self-confidence. Our students have convinced us of the power of having to produce convincing evidence to verify the worth of their work. They experience increasing confidence in their own *judgment* as well as in their performance when they can validate it for themselves. As one student put it:

I think that one of the big things self assessment gives you is a lot of confidence. When you know you have that evidence for what you've done, it makes you feel confident about what you can and can't do. You're not just looking at what someone else says about you. And you can look at that and see why or why not and back up what you say about what you did. It's just really confidence building.

Such confidence is related to the perceived self-efficacy that Bandura (1997) has been studying for more than a decade, which he defines as "the belief about what one can do under different sets of conditions with whatever skills one possesses" (p. 39). His findings confirm that "efficacy beliefs affect thought processes, the level and persistency of motivation, and affective states, all of which are important contributors to the types of performances that are realized" (*ibid.*, p. 37). Further, "belief in one's learning efficacy activates and sustains the effort and thought needed for skill development. . . . Perceived efficacy thus contributes to the acquisition of knowledge and development of subskills, as well as drawing upon them in the construction of new behavior patterns" (*ibid.*, p. 61). Our students give persistent testimony that self assessment based on criteria and evidence of meeting criteria confirms their abilities for them and thus encourages them to continue learning.

Broadening of the Concept of Self Assessment for Each Student

Through each student's continuous practice of self assessment, she participates in the community of judgment that we seek to develop among ourselves as faculty, staff, and students. She understands better and better what is entailed in the assessment of her work—the role of knowledge, values, and perception; understanding of the abilities being assessed; the legitimacy of a variety of perspectives; the nature of evidence; the necessity and limitations of criteria. She sees her peers developing their power of *judgment* as she is developing hers, and learns to respect theirs as she learns to have confidence in her own. She understands what it means to make an informed, responsible *judgment* of one's own performance or that of others.

Gradually she internalizes her ability to self assess so that she experiences her own abilities as transferable beyond a specific performance.

Self assessment in the digital age

Harnessing the power of information technology to enhance self assessment has been our most recent challenge. The advent of the personal computer, networked computers, the possibility of storing student performances, feedback, and self assessments not only in text formats but also in audio and video modes, the ubiquity of the World Wide Web, which makes information available to the user anytime and anyplace — all these, we saw, had the potential to enhance the cumulative power of self assessment. Our task, then, was to use information technology not just as a storage bin for self assessments but as a means for students to see their progress over time and to direct their own learning. We also wanted to develop a system that would help the faculty and external assessors guide student learning based on previous feedback and self assessments.

Our initial efforts have led to the development of the first version of what we call the Diagnostic Digital Portfolio (DDP) (see www.ddp.alverno.edu). Newly implemented, the DDP with its guides and sorting protocols, enables students, faculty, and advisors to use selected student work samples, criteria, student self assessment records, and assessor feedback to identify and review student learning patterns by discipline and by ability. When fully developed, it will help faculty diagnose student learning problems that may stem from diverse learning styles.

A key element of the DDP is its role in enhancing student self assessment. Students are able to reflect on their learning development at critical intervals in their academic careers, diagnosing their strengths and areas needing development and, based on these assessments and faculty feedback, to set forth a *plan* for future learning in specific discipline areas. The DDP allows students to review their work over time and across disciplines, thereby enabling them to self assess with more accuracy and depth.

Our Research on Self Assessment

Our research on self assessment has been a sustained collaborative inquiry crossing discipline, department, and faculty-staff lines. Within three broad strands — teachers' discourse about teaching and learning; an integrated longitudinal, empirical study of student learning and development in the curriculum and beyond; and an ongoing study of students' performance on assessments — self assessment emerged as important.

The first of these strands draws on our recurring conversation as we plan and reflect on our practice. The ongoing discussion of faculty in disciplinary and interdisciplinary groups, in which they use their own practice to review and construct ideas about assessment and learning, has been carried forward in regular department meetings as well as in college committees and workshops. The analysis of minutes from these meetings as well as of various working documents has helped us monitor our understanding of the meaning and use of self assessment.

In the second strand, the extensive interviews that were part of the college's longitudinal study conducted by the Office of Educational Research and Evaluation — interviews on students' own perspectives on their learning and on their performance in the curriculum and after college — provided a wealth of data from which self assessment gained further significance. We found that as students develop their self assessment capacities, they take charge of their own learning. Analysis of these data, integrated with other data from the longitudinal study, has recently resulted in a model of learning that further illuminates the roles of self assessment and self reflective behaviors in transformative learning cycles (Mentkowski & Associates, 2000). Through cycles of performance, self assessment, reflective learning, and re-envisioning their performance in specific roles, students gained a sense of self-confidence rooted in their capacities.

The third strand — using the self assessment components of existing student assessments — serves a related critical function. We found that as learners reflect on their performance, they reveal something of their own processes as well as of the processes of the performance assessments themselves. A critical mass of student samples for

a particular instrument has then become material from which we further explore the Alverno Framework for Self Assessment and the role of self assessment in learning. These reflections also provide a continuing basis from which to improve assessments and their contributions to learning.

As learners integrate performances and self assessments, we have found that they build a sense of "what I can do across situations and how I can improve." The capacity to self assess, then, becomes key to their ongoing learning and their transfer of learning to new contexts. These factors endure after graduation and facilitate the transition to performing beyond college. At the same time, these findings emphasize the importance of teaching and assessment processes that help students build their capacity to self assess throughout their learning experiences.

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 appeared. For the same reason we spell "self awareness," "self evaluation," "self monitoring," and "self reflection" without a hyphen.

References

- Alverno College Faculty. (1992). *Liberal Learning at Alverno College*. Milwaukee, WI: Alverno College Institute.
- Alverno College Faculty. (1994). *Student assessment as learning at Alverno College*. Milwaukee, WI: Alverno College Institute.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, N.J.: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Barnett, R. (1997). *Higher education: A critical business*. Buckingham, UK: Society for Research into Higher Education and Open University Press.
- Boud, D. (1991). *Implementing student self-assessment*. HERDSA Green Guide, 2nd ed. Sydney, Australia: Higher Education Research and Development Society of Australasia.
- Boud, D. (1995). *Enhancing learning through self assessment*. London: Kogan Page.
- Boud, D., Keogh, R., & Walker, D. (Eds.) (1985). *Reflection: Turning experience into learning*. New York: Kogan Page (London).
- Brew, A. (1999). Towards autonomous assessment: Using self-assessment and peer assessment. In S. Brown & A. Glasner (Eds.), *Assessment matters in higher education: Choosing and using diverse approaches* (pp. 159-171). Buckingham, UK: Society for Research into Higher Education and Open University Press.
- Brockbank, A., & McGill, I. (1998). *Facilitating reflective learning in higher education*. Buckingham, UK: Society for Research into Higher Education and Open University Press.
- Candy, P. C. (1991). *Self-direction for lifelong learning*. Jossey-Bass Higher and Adult Education Series. San Francisco: Jossey-Bass.
- Chickering, A., & Reisser, L. (1993). *Education and identity*. Jossey-Bass Higher and Adult Education Series. San Francisco: Jossey-Bass.
- Cowan, J. (1998). *On becoming an innovative university teacher: Reflection in action*. Buckingham, UK: Society for Research into Higher Education and Open University Press.
- Ellis, R. J., & Cronshaw, S. E. (1992). Self-monitoring and leader emergence: A test of moderator effects. *Small Group Research*, 23, 113-129.
- Heron, J. (1981). Assessment revisited. In D. Boud (Ed.), *Developing student autonomy in learning* (pp. 55-70). New York: Nichols Publishing Co.
- Heywood, J. (2000). *Assessment in higher education: Of student learning, teaching, programs, and institutions*. London: Jessica Kingsley.
- Kent, R. L., & Moss, S. E. (1990). Self-monitoring as a predictor of leader emergence. *Psychological Reports*, 66, 875-881.

- Kolb, J. (1998). The relationship between self-monitoring and leadership in student project groups. *Journal of Business Communication*, 35, (22), 264-282.
- Kusnic, E., & Finley, M. L. (1993). Student self evaluation: An introduction and rationale. In J. MacGregor (Ed.), *Student self evaluation: Fostering reflective learning* (pp. 5-14). New Directions for Teaching and Learning, no. 56. San Francisco: Jossey-Bass.
- * Marienan, C. (1999). Self-assessment at work: Outcomes of adult learners' reflection on practice. *Adult Education Quarterly*, 49, (3), 137.
- Mentkowski, M., & Associates. (2000). *Learning that lasts: Integrating learning, performance and development*. San Francisco: Jossey-Bass.
- Much, N., & Mentkowski, M. (1984). *Student perspectives on learning and development in college*. Milwaukee, WI: Alverno Productions.
- Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass Higher Education Series. San Francisco: Jossey-Bass.
- Zaccaro, S. J., Foti, R. J., & Kenny, D. A. (1991). Self-monitoring and trait-based variance in leadership: An investigation of leader flexibility across multiple group situations. *Journal of Applied Psychology*, 76, 308-315.

Chapter 1.

Self Assessment in the Psychology Program

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Introduction

If one looks at Ebbinghaus' historic study of his own memory, examines current writings on metacognition, reflects on Daniel Goleman's popular *Emotional Intelligence*, or considers the psychoanalytic tradition of countertransference, it becomes clear that there have always been leaders in the field of psychology who have demonstrated the value, and in some cases the *imperative*, of having a fluent understanding of our own selves.

Cognitive studies on metacognition, for example, suggest that when students possess strong metacognitive abilities, they actually perform as well as students with superior intellectual capabilities. When they can realistically assess their own knowledge (or lack thereof) regarding a subject and their ability to use it, they can then define clear goals for themselves. If in addition they can accurately estimate the amount of time and effort they need to *gain* that knowledge and ability, and can identify the methods that work for them in doing so, they can then put effective problem-solving strategies to work in their learning. Our research at Alverno College supports that (Mentkowski & Associates, 2000). Such metacognitive ability enables students to do better than they would if they had never learned to make such facilitative factors explicit.

Bandura's studies (e.g., 1986) suggest that our *attitudes* in approaching a task, particularly about our own abilities, are important predictive variables related to a successful outcome and cannot be ignored. Goleman (1995) argues that a sound working knowledge of our *emotions* is essential to making our way in the world. Both would emphasize that these more implicit responses need to be clearly identified and then effectively channeled if we are to achieve our hoped-for results.

1. Bruning, Schraw, and Ronning (1990) provide a good review on this subject.