Effective Culturally-Inclusive Assessment of Student Learning & Academic Performance

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The purpose of this manuscript is to equip instructors with skills for improving the quality, validity, and equity of assessing student learning. The following principles and strategies also improve the quality of teaching and promote the academic achievement of students from diverse cultural backgrounds.

"An obvious question to pose when developing assessment instruments is, 'To what extent does this assessment promote quality and diversity simultaneously'?"
—Ginsberg & Wlodkowski, *Diversity & Motivation*

Comprehensive assessment of student learning should be holistic, i.e., it should evaluate the development of the student as a whole person. Effective assessment goes beyond standardized test scores to include important aspects of personal development, such as:

(a) Development of *Lifelong Learning and Thinking Skills* (e.g., learning how to learn, how to think deeply, and how to acquire and communicate knowledge)
(b) *Emotional* Development (e.g., understanding, controlling, and effectively expressing emotions)
(c) *Social* Development (e.g., human relations skills, intercultural communication skills, leadership development, and civic engagement)
(d) *Ethical* Development (e.g., clarifying one's values and developing personal character)
(e) *Physical* Development: (e.g., acquiring and applying knowledge about the human body to prevent disease, maintain wellness, and promote peak performance), and
(f) *Identity* Development (e.g., formulating a positive self-concept and sense of personal direction)

Effective assessment should include evaluating changes that take place in students' attitudes, behaviors, and cognition (thinking). Student learning may take place in three key forms or dimensions, sometimes referred to as the "ABCs" of student assessment:

A = Affective—learning represented by change in students' *attitudes*, *perspectives* or viewpoints (e.g., changes in their attitude toward school or their views of different cultural groups).

B = Behavioral—learning demonstrated by a change in students' *habits* (e.g., student improvement in study and work habits, or in students' *actions* (e.g., becoming more engaged in class)

C = Cognitive—learning demonstrated by gains in *knowledge* and *thinking* processes (e.g., acquisition of curricular knowledge, self-knowledge, or critical thinking skills).

Effective assessment utilizes *multiple* and *varied* methods of student performance evaluation.

A cardinal principle of effective assessment is employing of multiple methods, rather than relying exclusively on a single method or source of evaluation. Use of multiple methods allows for cross-validation and minimizes the risk that students' performance results reflect the particular method used to assess their learning rather than the full scope of what they actually learned.

Culturally inclusive assessment is also maximized by use of different assessment methods because they are more likely to be sensitive to the diverse cultural backgrounds and learning styles of students in class. Thus, use of multiple and varied evaluation methods to assess student achievement provides a more balanced system of assessment that increases (a) assessment *validity*—because the limitations of one evaluation method are more likely to be counterbalanced by the strengths of the others, and (b) assessment *equity*—because different evaluation formats more effectively accommodate the variety of learning styles and skill sets that diverse students bring to the learning process.

Research indicates that students vary appreciably in terms of what evaluation procedures they're most comfortable with (Lowman, 1984; McKeachie, 1986); for example, students whose writing skills are not yet well developed may feel less comfortable with (and may be unduly penalized by) exams that are comprised solely of essay questions. By utilizing diverse evaluation methods, all students will have at least occasional opportunities to demonstrate their knowledge and skills in a way that is most compatible with their preferred style of learning and having their learning evaluated (Sedlacek, 1993; Suskie, 2000). "Students generally need a range of opportunities and approaches to demonstrate what they know" (Ginsberg & Wlodkowski, p. 272).

Effective assessment includes a balanced blend of *quantitative* and *qualitative* data on student performance. Evidence of student learning can be gathered in *quantitative* form, i.e., numerical data that can be summarized statistically (e.g., student scores on tests and other performance measures), or *qualitative* form, i.e., non-numerical or "human" data the form of spoken and written words that can be analyzed for themes or patterns (e.g., students' written comments on exams and assignments, or spoken comments made during oral presentations or class discussions).

These two basic forms of data should be viewed as *complementary* sources of evidence for student learning with offsetting advantages and disadvantages. For instance, *quantitative* assessment data is more efficiently scored (number crunching by machine rather than a person or multiple persons) and easier to collect in large amounts. However, it often captures the outcome or product of learning without providing much information about the process of learning (or failure to learn). In contrast, collecting and analyzing *qualitative* assessment data is more time-consuming and labor intensive, but it can often provide information about the thought processes that lead students to student learning (or failure to learn). For instance, students' written reflections on what they are at each step of solving a math or science problem can provide valuable information on the underlying thought processes that lead successful students to arrive at the correct solution and common reasons why students make mistakes.

The following practices are recommended for providing students with *multiple and varied* evaluations of their knowledge and skills.

Use assessment methods that evaluate student performance for work done *in class* (e.g., quizzes or exams) and *out of class* (e.g., take-home tests, assignments, or projects). Timed classroom-based tests may be one student's meat, but another's poison. Evaluating student achievement by methods other than just tests provides more opportunity and greater equity for students who are not strong test takers.

One strategy that instructors could use to intentionally diversify assessment is to conceptualize student evaluation methods in terms of the following categories and to be sure that they're using at least one assessment method per category:

(a) *product* assessments: written essays, stories, research reports, projects, etc.
(b) *performance* assessments: tests, oral presentations, debates, science demonstrations, artistic expression (e.g., visual arts, drama, music) etc., and
(c) *process-focused* assessments (e.g., oral questioning, interviews, journaling, portfolio development, etc.) (Ginsberg & Wlodkowski, 2009).

Assess students' ability to demonstrate their knowledge through in *different communication modes or modalities* (e.g., written reports, oral reports, multi-media presentations). Just as students have different learning styles for acquiring knowledge, they may have different styles for expressing or demonstrating their knowledge. An English instructor, identified as "outstanding" by students and faculty colleagues, provides a good example of how instructors can encourage use of diverse forms of knowledge expression: She requires every student in class to write two essays on topics that she assigns; on the third assignment, however, students are given five or six methods for evaluation to choose from. Among the options offered to students is a third written essay, a creative writing piece, a dramatic act to be performed in front of class (alone or as part of a team project), or an original video presented in class that students develop either individually or in teams. Students are also allowed to create and submit additional options for instructor approval (Wilson, 1987).

Draw test questions from a *variety of informational sources* (class presentations, discussions, assigned readings, etc.). Culturally-inclusive evaluation recognizes that knowledge is acquired from and applied to multiple settings and cultural contexts.

On exams, include both "subjective" and "*objective*" test questions (e.g., essay and multiple-choice questions). Students are encouraged to use and develop different cognitive when exposed to questions that ask them to supply their own answers, versus selecting an answer from alternatives supplied for them. Essay questions require students to *recall* knowledge by producing it on their own, which promotes the development of writing and synthesis skills. In contrast, multiple-choice questions require students to *recognize* important distinctions by choosing from possible alternatives, which promotes the development of reading and analytical reasoning skills.

Neither of these types of questions is superior to or more "authentic" than the other. In college and life beyond college, students will be required to synthesize information in writing and make discriminating choices based on information they read. Both of these mental activities

have the potential to promote critical thinking or other forms of higher-level reasoning. As one educational measurement scholar puts it: "Producing an answer is not necessarily a more complex or difficult task, or one more indicative of achievement than choosing the best of available alternatives" (Ebel, 1972, pp. 124-125). Anyone who has reviewed or taken standardized tests for admission to college, graduate school or professional school can attest to how multiple-choice questions are capable of assessing higher-level cognitive skills. If multiple-choice questions test only factual knowledge or rote memory, it is, as Clegg and Cashin point out, "the result of poor test craftsmanship and not an inherent limitation of the item type; a well-designed multiple-choice item can test higher levels of student learning" (1986, p. 1). Conversely, as Erickson and Strommer observe, "Many essay questions masquerade as tests of complex thinking skills when, in fact, they can be answered on the basis of memorization" (1991, p. 137).

Thus, instructors should not automatically exclude any particular testing format when constructing exams. Instead, they should be ready to incorporate a balanced blend of essay (writing), multiple-choice, and true-false questions. It may also be possible to integrate different test-question formats into a single test question. For example, writing can be incorporated into multiple-choice or true-false questions by giving students the option of clarifying their choices in writing, or by requiring them to write a justification for their answer to certain multiple-choice or true-false questions. Also, students may only be allowed to earn maximum credit on designated multiple-choice questions if they both choose the correct alternative *and* explain (in writing) why it's the correct choice (Zinsser, 1988). Allowing students the opportunity to explain or express their interpretation of what the "correct" answer also serves to validate the way in which students perceive "reality" or the "truth" and helps them move away from dualistic (right or wrong) thinking and thinking that the person in authority is always "right" (knows the truth) (Butler, 1993).

"Assessment experiences that reward students who best conform to the instructor's norms and values serve as additional evidence of cultural bias."
—Ginsberg & Wlodkowski, *Diversity & Motivation*

Exams are more likely to be inclusive and equitable if it they engage in a variety of test-preparation and test-taking skills. This variety also encourages students to exercise and develop the full repertoire of test-taking skills that they'll be expected to use at higher levels of education and on certification exams required for entry into certain occupations (e.g., nursing, teaching, and law).

Include assignments that require students to work both *independently* (individually) and *interdependently* (in groups or teams). Developing independence and interdependence are important dimensions of personal development (Chickering, 1969; Chickering & Reisser, 1993). Assessing student performance in both of these contexts creates a more diversified and comprehensive system of student-performance evaluation.

For *group projects*, assess group members on both their *independent (individual)* work and their *interdependent (collective)* work. Survey research indicates that high-achieving students report high levels of great dissatisfaction with group projects in which all members of their group receive the same, undifferentiated grade (Fiechtner & Davis, 1991). High-achieving students

complain that their individual effort and contribution to the group's final product often exceeds the efforts of their less-motivated teammates, yet these "free riders" or "social loafers" are inequitably awarded the same grade. For this reason, resist the temptation to conveniently assign a single "group grade" to all members of the group. Instead, build assessment of *individual accountability* or *personal responsibility* into the evaluation of students' group work. One way to ensure that the individual responsibility of each group member can be readily identified and evaluated is by having each member assume responsibility for contributing a distinct or unique component to the group's final product (e.g., a particular piece or unit of information, or a different cultural perspective). To ensure that each member also demonstrates some degree of *collective responsibility* to the group, individual members could be assessed on how well they connect or integrate their personal contributions with the contributions made by other group members.

Student Learning is Promoted by *Frequent Assessment*

Each assessment of student performance represents only an *estimate* of what that student has learned or achieved. Some assessments will overestimate student learning while others will underestimate it. These errors of measurement tend to be distributed randomly across different assessments given at different times, so the best way to reduce the magnitude of measurement errors is to base the student's final grade on multiple assessment measures; this will allow random errors of measurement to balance out or cancel each other out (Gage & Berliner, 1984; Gronlund, 1985). Measuring student achievement on the basis of only a few high-stakes assessment tasks can lead to inaccurate judgments, "especially with learners whose experiences, behaviors, beliefs, and values challenge an instructor's ways of understanding" (Ginsberg & Wlodkowski, 2009, p. 273).

In addition to improving test validity by providing a larger sample of student performances on which to base grades, frequent assessment has the following advantages:

* Frequent assessment encourages students to "stay on top things" and work more *consistently*. Assessment frequently requires students to distribute their study time more evenly throughout the term.

* Frequent assessment requires students to learn and retain a more limited amount of material at one time, giving them the opportunity to learn the material more deeply. It's probably safe to say that students will learn smaller amounts of material more deeply and larger amounts of material more superficially. Tests that assess large amounts of information tend to encourage "surface learning" and memorization of facts, while diminishing students' depth of thinking and motivation to think (Ginsberg & Wlodkowski, 2009; Wieman, 2007)

* More frequent assessment is likely to result in students being assessed earlier in the term; thus, they receive *earlier feedback* in the learning process that can be used to make early adjustments to improve future performance. Furthermore, when students receive earlier feedback, they are more *motivated* to attend to it and use it for performance-improvement purposes because they know they'll have time to rectify early errors and achieve a good final grade. Furthermore, early and frequent assessment allows instructors to better understand "the different abilities and

backgrounds that are present among students and may suggest strategies for dealing with this diversity" (Education Commission of the States, 1995)

Frequent assessment can be incorporated into students' work on larger, long-range projects by having them submit early graded "installments" of work segments at interim points throughout the term. For instance, if the project involves a research report, students could submit early installments of their work in the following sequence: (a) Topic identification and tentative bibliography after the first month, (b) outline by the end of the second month, (c) first draft by the third month, and (d) final draft during the last week of class. These submitted installments are also an effective way for instructors to combat plagiarism and "ghost writing."

Furthermore, requiring shorter-term installments of work reduces the likelihood that students will *procrastinate* and assures them that they're "on the right track" as their work proceeds. An additional reason why this short-term installment strategy may be effective for writing assignments is suggested by research indicating that "writer's block" is less likely to be experienced when writing is done in small steps with specific deadlines for completing each step (Hull, 1981; Rennie & Brewer, 1987).

Hold High Expectations for All Students by Clarifying What Your Performance Expectations Are and by Clarifying What High-Quality Performance Looks Like

It can often be difficult to explain verbally or capture in words what constitutes "excellence" or "A" work—as reflected in the common expression: "I can't tell you what it is, but I know it when I see it". Excellence may be more effectively communicated to students by allowing them to see examples of excellent work.

The following strategies may be used to help students to literally "see" what constitutes high-quality work.

Provide students with *models* of excellent (grade "A") work.

High-quality work submitted by students in previous classes may be and saved and shown to current students. These illustrations of excellence could be one students' total work product, or pieces of different students' work that illustrate excellence with respect to a particular performance criterion (e.g., separate illustrations of a student's work that demonstrates excellent overall organization, clarity of written expression, or critical thinking). Providing students with such concrete illustrations should also reduce the likelihood that they will voice the same complaint as the following college freshman: "I'm not really sure how my essay answers can be improved to give her what she wants" (Erickson & Strommer, 1991, p. 49).

Instructors could develop a file of former students' outstanding work to share with current students as models to aspire to, or emulate.

"Evidence that other students—students just like them—have done excellent work is a strong motivator."
—Robert E. Scott & Dorothy Echols Tobe, *Communicating High Expectations*

Distribute anonymous copies of students' written work from previous classes that range in quality, and ask the class to rank the students' work and identify their reasons (criteria) for their ranking. Research shows that students' writing improves if they first identify instances of

good/bad writing and participate in the process of developing criteria for evaluating the quality of their own writing (White, 1985).

Provide students with a *checklist of criteria* that will be used to evaluate the quality of their work. The criteria that an instructor uses to determine high-quality work should not remain a mystery to students; they should be shared with students so that they are positioned to self-assess their performance before being formally assessed by the instructor. For writing assignments, the following criteria and illustrative descriptions might be shared with students to clarify what a well-written paper looks like and motivate them to meet these criteria in their own work.

* *Organization*. The paper should include:
(a) an introduction,
(b) a conclusion,
(c) clear transitions between paragraphs, and
(d) well-defined section headings.

* *Documentation*. The paper should include:
(a) a variety of sources that are used in a balanced fashion—as opposed to over-reliance on one or two references,
(b) use of some primary sources—as opposed to exclusive reliance on secondary references (e.g. textbooks), and
(c) a blend of historical sources and current publications.

* *Presentation*. The paper should be presented in a manner consistent with stated guidelines about formatting features, such as:
(a) page margins,
(b) line spacing,
(c) paper length,
(d) references cited in the body of the paper, and
(e) references cited in the reference section at the end of the paper.

Before administering an exam to students, provide them with as much relevant information as possible about its *content* and *format*. For instance, prior to exams, students could be informed about:

* the number and nature of questions (essays, multiple choice, etc.),

* relative point value of test questions,

* amount of time allowed to complete exam,

* materials that students need to bring to the exam, and

* permissible test-taking aids (e.g., calculators, dictionaries).

The less uncertainty students experience prior to an exam, the less test anxiety they will experience during the exam.

Prior to the *first* exam of the term, share a previously-used exam to allow students to familiarize themselves with your testing style. It may be worth taking a portion of class time to discuss the layout and expectations of an old exam before students encounter their first test of the term.

To prepare students for major exams, provide them with *study guides* that *identify specific learning objectives (intended learning outcomes)*—i.e., what information students are expected to know and how they'll be expected to show they know it. Providing students with specific study objectives prior to exams does not mean that the instructor is "giving away" test answers. Instructors can ensure that students focus their study time on learning what they should learn without being accused of narrowly "teaching to the test." Students can be directed to critical class concepts and instructed how they can learn these concepts deeply without being shown the exact test questions that will appear on the exam. For instance, a student guide may alert students to the fact that they will be expected to *evaluate* bias in the reporting of historical incidents or *apply* the concept of privilege to a current event—without knowing what specific test questions will be used to assess their ability to evaluate and apply these particular concepts.

One way to specify the content and thinking skills that students are expected to demonstrate on a test or assignment is by creating a "table of specifications" (Tyler, 1950), also known as a "content-by-process matrix," which lists what content (concepts) are to be assessed and the thinking processes that students are expected to use in relation to that content. (See Figure ___.)

TABLE OF SPECIFICATIONS

Content Area:	***Thinking Process***: Comprehension	Application	Evaluation
Bias			
Privilege			
Discrimination			

This content-by-process matrix can function as an organizational blueprint for devising exams and assignments that are balanced and comprehensive. By ensuring that evaluation items appear in each cell of the matrix, the instructor ensures that students will be evaluated on a balanced, representative sample of important concepts and thinking skills.

Research shows that students tend to study material that they expect will be on the test and will use cognitive processes while studying that they think they'll be expected to use on the test. When students are given study objectives that involve higher-level thinking skills, they are more likely to engage in higher-level thinking with respect to the concepts they're studying and also demonstrate greater retention of those concepts (Marton & Saljo, 1976). These findings strongly suggests that supplying study objectives that involve higher-level thinking skills (e.g., application, evaluation, synthesis) will increase the probability that these cognitive skills will be practiced during students' study time and utilized during test time.

Moreover, at-home study time provides students with the time they need to engage in higher-level thinking. Test time should be the time when students demonstrate those higher-level thinking skills they've practiced and honed during their study time. It is unrealistic to expect students to display higher-level thinking from scratch during the restricted time frame of an in-class exam because studies show that performing under time pressure inhibits and restricts higher-level thought processes, such as critical and creative thinking (Hart, 1983). Thus, students shouldn't be expected to study facts and then be able to integrate or synthesize those facts during a timed exam. However, if students are provided with specific study objectives that encourage them to engage in integration or synthesis during study time, requiring them to write an already mentally-prepared synthesis during test time is a reasonable expectation and represents a valid demonstration of their higher-level thinking skills.

Providing students with specific learning objectives to prepare for exams has multiple advantages, which include the following.

* Specific learning objectives *increase students' motivation to study* because their performance expectations are made explicitly clear. Since students know where to focus their study efforts, they are more likely to study because they see a clearer connection between effort expended and grade achieved. Perhaps nothing can be more disheartening and de-motivating for students than to study hard and then discover later (during the test) that they "studied the wrong things." When people do not see a connection between the efforts they expend and the outcomes they achieve, it decreases their sense of self-efficacy (Bandura, 1997) and increases their feeling of "learned helplessness" (Seligman, 1998).

* Learning objectives enable students to *self-monitor* their learning and identify specific concepts they're having difficulty understanding—*before* they're tested on those concepts. Thus, specific study learning objectives empower students to engage in early self-diagnosis, helping them troubleshoot and pinpoint sources of confusion before they adversely affect their test score.

* Specific learning objectives can *reduce test anxiety* by reducing students' feeling of uncertainty and supplying them with a support structure for test preparation. Research indicates that when performance expectations match the reality of the performance task, less performance anxiety is experienced (Tracey & Sherry, 1984). Thus, equipping students with specific study objectives serves to reduce their test anxiety by reducing their uncertainty about how they will be expected to perform, i.e., what they will be expected to know and be able to do on the test (which should also reduce instructor frustration with having to repeatedly answer the perennial student question: "Will this be on the test?")

* Specific study objectives help instructors *identify and prioritize* the most essential concepts for students to learn. When instructors take the time to identify the most critical or most powerful ideas that students should grasp, it ensures that students will be assessed for learning concepts that are most important for them to learn—i.e., they will spend their out-of-class study time on material that is central or crucial, not peripheral or trivial.

"The only instructional sin greater than teaching obsolete or trivial information is to test and grade students about such knowledge."
–Stanford Ericksen, *The Essence of Good Teaching*

Even if instructors don't "teach to the test," students will "study to the test" because they'll study what they expect to be on the test (Frederiksen, 1984; Gamson, 1993). By providing students specific study objectives, instructors direct students' test expectations and preparation toward the most crucial concepts. Not all course material is equally important; learning objectives increase the likelihood that amid the wealth of information presented to students in class and in readings, they will find and devote their study time to learning what is most important to learn.

* Providing students with study objectives before exams promotes *instructor rapport with the class*. When an instructor takes the time and effort to supply students with study guides reduces the likelihood that they'll perceive their instructor as someone playing a game of "keep away"—withholding information about the test, then "ambushing" them later with "trick" test questions. Relevant to this point are the results of one major survey of students that asked them to list instructor behaviors that inhibit positive instructor-student relationships. Among their top-ten student complaints were instructors who: (a) "are not specific about what the test will cover", (b) "create trick questions", and (c) "give tests that don't correspond to lectures" (Ludweig, 1993).

* Specific study objectives increase *test validity* by ensuring that test questions are derived exclusively from the same pool of learning objectives that students are studying. In assessment terminology, providing students with specific learning objectives increases "content validity" because it ensures that the content that students are expected to learn is consistent with the content that appears on the test (Gronlund, 1985).

Naturally, study guides comprised of specific learning objectives (outcomes) will take time to construct, but the short-term cost in time should be far outweighed by its long-term benefits for teaching and learning. This favorable cost/benefit ratio of is captured by the following reflections of an instructor who implemented the practice of constructing study guides with specific learning objectives:

> I decided to try using more detailed study guides. These guides would be questions from which exam questions would be drawn, thus ensuring that the students paid attention. Making these decisions required substantial effort but deepened my understanding of my objectives. I often gave questions that asked for more careful analysis, synthesis, and critical thinking than I had been able to use previously. Even so, grades quickly rose. I found that by using guided reading I could foster out-of-class learning to teach some key aspects of the content more effectively than when I had lectured on it. What I had come to gradually was an outcome-based course design (Nelson, 2010, pp. 184-185)

Instruct students how to *self-monitor* the quality of their academic performance and level of achievement at all points during the term.

When students are uncertain about "where they stand" in class, it can produce grade anxiety. Research indicates that one distinguishing characteristic of successful students is that they engage in *self-monitoring*, i.e., they are aware of how well they are learning and where they stand in class (Pintrich, 1995; Weinstein, 1994). One way to empower students to self-monitor

their academic progress is by encouraging them to save and track their grades for completed tests and assignments. After each assignment or exam, have students add its points to their cumulative total so they can determine their overall class grade at all times throughout the term.

Use students' performance patterns on tests and assignments as feedback to assess *the quality of your exams* and the *effectiveness of your teaching*. One way that instructors can acquire this feedback is to have students complete a brief, post-exam evaluation form that includes questions such as the following:

* Was there anything on the exam that you didn't expect to see?

* Was the grade you received on this test the grade you thought you were going to receive?

* How much time did you spend preparing for this test?

* Do you think your test grade was what you deserved for the amount time and effort you put into studying for the test?

* Which questions or parts of the exam did you find to be most challenging? Least challenging?

* Now that you have experienced the test, would you have studied for it differently? In what way(s)?

* Did you learn anything while taking the exam (e.g., acquired any new knowledge or thinking skill)? (McMullen-Pastrick and Gleason, 1986)

These questions can be used as a springboard for launching students into an honest discussion of quality of their test preparation and the quality of the test itself. The information gleaned from this discussion can be used by instructors to improve the clarity and validity of their exams. One characteristic of effective teaching in general and teaching of diverse student in particular, is the ability to access and respond to student feedback (Ginsberg & Wlodkowski, 2009).

Another effective way in which instructors can assess and improve the quality of their validity of tests is by performing an *item analysis* on student answers to test questions. Item analysis involves computing the percentage of students that answer different multiple-choice or true-false questions correctly, and students' average score on different essay questions. Instructors can use this information to identify specific test items on which a *majority* of students performed poorly, which may suggest that the test item was ambiguously written, or that students received inadequate instruction on the concept tested by these items. Instructors can use this feedback to immediately adjust students' test score and grade so that they are not unfairly penalized for missing such items. This information may also be used to improve the clarity of these test questions and the quality of teaching provided on the concepts assessed by these questions.

Item analysis also has another powerful purpose: it helps instructors construct *moderately challenging* exams, i.e., exams comprised of test items that are neither overly simple nor overly difficult. A large body of research suggests that moderately challenging tasks generate higher levels of intrinsic motivation than tasks that are extremely difficult or extremely easy

(Csikszentimihalyi, 1990, 1995). Reviewing students' average scores on individual test questions can provide information on whether the question was moderately challenging by assessing its level of difficulty. Test items that proved to be too easy or too difficult could be eliminated, re-written, and re-evaluated on a future test. By engaging in an ongoing process of reviewing and modifying test items in this fashion, instructors can eventually end up with a comprehensive set of moderately-challenging questions that can be included on their exams.

Adopt a *learning-for-mastery* model of assessment whereby students are given the opportunity to *retake exams or re-submit assignments* in order to *improve* the quality of their work and their class grade. Students should have the opportunity to learn from their initial evaluation and use it as feedback to improve their performance. When students are able to repeat and improve their performance on a test or assignment, research indicates that they make significant gains in learning and academic achievement (Bloom, 1984; Fitzgerald, 1987). This finding suggests that giving students an opportunity to review their exams and correct their mistakes would be a highly effective educational practice.

Providing students opportunities to repeat and improve their work is consistent with the "mastery learning" model of education. This model takes the position that initial differences in student performance on a test or other measure of learning do not reflect differences their learning ability or potential. Instead, this original variation in performance levels reflects differences in the amount of time, practice, and feedback that individual students need to master the material—which are due, in part, to differences in the their prior learning experiences and cultural backgrounds. If initially low-performing students are given more time and chances to learn the material, they will eventually achieve a level of mastery comparable to those students who performed well on the original test.

The mastery learning model acknowledges that there are individual differences among students in their natural learning abilities or talents. However, these represent differences in the *speed* at which students can learn a particular concept or skill, rather than differences in their ability or potential to learn it (Carroll, 1963; Bloom, 1968, 1978).

Naturally, if students are given the opportunity to re-learn the material and be re-evaluated for performance improvement as suggested by the mastery learning model, it is likely to result in an upward shift in the distribution of course grades. For instructors who are concerned that giving students these extra opportunities to improve their performance will result in "grade inflation," that fear can be mitigated by *averaging* students' first and second scores rather than replacing their first score with their improved, second score. If the ultimate purpose of education is to maximize the academic achievement of all students, instructional practices that promote better learning should produce a welcomed upward shift of grade distribution. If students are willing to put in the extra time and effort to correct their mistakes and elevate their performance, instructors should not feel guilty or be chastised for "lowering academic standards."

"We need to distinguish between bad inflation resulting from unjustifiably high grades and good grade inflation [resulting] from more effective pedagogy and consequently improved achievement."
—Craig Nelson, Professor Emeritus of Biology, Indiana University; President, International Society for the Scholarship of Teaching and Learning

Grades should reflect what students actually learn and should be *criterion*-referenced, i.e., based on absolute standards or criteria (e.g., percentage of questions answered correctly)—

rather than norm-referenced, i.e., based on the percentage of peers they score higher than or beat out. Instructors should not let unchallenged expectations that they should have a "normal" distribution of grades (bell-shaped curve) distract them from using student-evaluation methods that most effectively promote student learning for all students.

Competitive "curve grading" is not only inconsistent with mastery learning and having high expectations for all students, it may also detract from interethnic and interracial harmony because research in social psychology reveals that when people engage in *competitive* interaction with members of racial or ethnic groups who are unfamiliar or initially disliked, negative attitudes toward these people are intensified (Burgess & Sales, 1977; Swap, 1977). In contrast, grading according to absolute standards is also more likely to result in greater student collaboration with respect to school work and less invidious social comparisons (Boyer, 1987).

"Grading on a curve does not allow all students to see how close they are coming to high standards of performance. If all students reach the standard, it is okay for all to reach the highest grade."
—Ginsberg & Wlodkowski, *Diversity & Motivation*

Grading according to absolute standards is also more likely to promote improvement in the quality of the instructor's teaching and test construction. As Erickson and Strommer (1991) point out:

> Grading according to [absolute] standards is more likely to point up problems and lead to improvements in teaching and test-taking practices. If several students do poorly on an exam, the low grades usually prompt some serious soul searching. Was instruction adequate? Was the exam poorly constructed? Or did students simply not study enough? We can correct such problems, but only if we detect them. Grading on a curve too often hides ineffective teaching, poor testing, and inadequate learning. So long as we give a reasonable number of A's and B's and not too many D's or F's, no one makes a fuss (pp. 154-55).

Assessment designed to promote student learning should take precedence over assessment designed to distribute class grades. Rather than perpetuating testing practices that focus less on assessing student learning and more on spreading out and sorting out students into grade categories, good instructors use assessment as a vehicle for improving their teaching and helping students from all cultural backgrounds attain clearly-defined learning outcomes and high levels of academic achievement. Effective, culturally-inclusive assessment begins with the educational philosophy that the instructor's role is to nurture and cultivate the growth of all students, rather than excavate and weed out "weak" students.

Student Learning is Promoted by the Delivery of Performance-Improving *Feedback*

According to the aforementioned "mastery learning model," all students are capable of achieving a high level if they are given the practice time to do so. The mastery model also stipulates that students if students make effective use of performance feedback, it will expedite their ability to learn from their mistakes and master the material. When students receive informative feedback that they can use to improve their performance (as opposed to just a grade, test score, or where they rank in class), they are more likely to likely to make an effort to

improve their performance and take personal responsibility for mastering the material or gaining competence in the skills they are being asked to learn (Zimmerman & Kitsantas, 2005).

Feedback enhances and accelerates student learning when it is: (1) prompt, (2) proactive, (3) precise, (4) practical, (5) persuasive, (6) personalized, and (7) positive. These characteristics of effective feedback defined in the box below.

"People can't learn without feedback. It's not teaching that causes learning. Attempts by the learner to perform cause learning, dependent upon the quality of feedback and opportunity to use it."
—Grant Wiggins, *Feedback: How Learning Occurs*

Effective Instructor *Feedback:*
Seven Central Features

1. *Prompt*: delivered *soon after* performance is completed.

2. *Proactive*: delivered *early* in the learning process, thus allowing for quick diagnosis and correction.

3. *Precise*: focuses specifically on and clearly identifies what the student needs to do to *correct* mistakes and improve performance.

4. *Practical*: provides students with an *incentive* to actually use the feedback provided and immediately apply it to improve their performance and grade.

5. *Persuasive*: provides good reasons *why* improvement should be made by relating it to the achievement of students' personal goals, thus increasing student motivation to *take action* on the feedback provided.

6. *Personalized*: delivered in an *individualized* and *non-threatening* manner that targets personal *actions* or *behaviors* needing improvement, rather than the student's general character or group membership.

7. *Positive*: includes recognition of student *strengths* and conveys *optimism* that productive change can be made in areas that need improvement.

What follows is a more extensive description of these "Seven Ps" of effective feedback and instructors may implement them in the classroom.

1. *Prompt* Feedback

Research supports the value of immediate feedback for promoting students' motivation to learn (Malone, 1981) and their retention of course concepts (Kulik, et al., 1978). Although instructors may not be able to provide students with immediate feedback following a test, they

can still provide students with prompt feedback by having an answer-key ready or solutions posted for review as soon as students complete their work. An instructor identified as "outstanding" (by students, faculty, and administrators) points out that there is another advantage of prompt feedback: “[It] indicates to the students the importance of what they are doing and my interest and concern for their learning the material” (Davis, Wood, & Wilson, 1983, p. 235).

2. *Proactive* Feedback

Feedback is more useful when it’s delivered early in the learning process, thereby allowing students ample opportunity to remedy shortcomings before they eventuate in poor grades and damaged self-esteem. Instructors can give short, ungraded exams or assignments early in the term so that students receive early feedback and use it to improve their subsequent graded performance.

Research on student motivation suggests that the majority of students approach academic challenges with “performance goals” in mind, i.e., they view learning situations as tests of their competence and strive to be judged as competent rather than incompetent. These students tend to attribute failure to low ability (rather than to low effort), feel ashamed or dejected when they do not perform well, and do not persist on tasks if they are not initially successful. In contrast, a minority of students approach academic challenges with “mastery” goals, i.e., they view learning situations as opportunities to improve their ability and do not define initial mistakes as failures; instead, they persist if they’re not initially successful and experience pride or pleasure as they overcome mistakes in the process of mastering academic tasks (Dweck & Leggett, 1988).

Since this research indicates that most students have performance goals rather than mastery goals, instructors should give strong consideration to designing assignments that enable students to explore some early success in class. These early-success experiences should keep help them develop “mastery” goals, increase their initial self-confidence, and strengthen their ability to persist on more difficult tasks encountered later in the term.

3. *Precise* Feedback

In addition to knowing where they stand in class, students need to know *how* to go about rectifying their mistakes so they can avoid making those same mistakes again. Effective feedback should inform and demonstrate to learners what particular aspects of their performance need improvement.

It’s difficult for students to improve their performance when the only feedback they receive is a generic grade (Brophy, 2004). Even providing students with general written comments like, "Your paper needs more organization" lacks the specific feedback of comments such as: "Your paper needs an introduction, a thesis statement, and a conclusion which summarizes the paper’s major points." Research conducted at Harvard indicates that improvement in student writing is related to the *specificity* of action strategies that were included in the feedback they received from their instructors (Buskey, cited in Light, 1992).

4. *Practical* Feedback

Feedback becomes “constructive” when students build on it to improve their performance and experience practical benefits for doing so. One straightforward strategy for getting students to use feedback constructively is by requiring students to correct their mistakes. In two independent studies of this practice, when instructors returned exams to students, they listed brief

references to the textbook pages and/or class notes after every test question. On test questions that were answered incorrectly, students were required to write a short paragraph that identified the correct answer and explain why it was correct. When compared to students in other sections of the same course who didn't receive this feedback and were not asked to correct their mistakes, students who received feedback and corrected their error : (a) scored higher on the same final exam, (b) liked the course more, and (c) felt more confident of their abilities in the course subject (Clark, Guskey, & Benninga, 1983; Guskey, Benninga, & Clark, 1984).

An alternative to *requiring* students to correct their mistakes is simply to provide them with a strong *incentive* to do so. For instance, students could be allowed to redeem some (or most) of their lost points and improve their grade if they correct and resubmit their answers.

5. *Persuasive* Feedback

Effective feedback also motivates students to improve their performance by articulating *why* improvement is important for achieving their current goals and future plans. Instructors cannot assume that students see the purpose of academic learning and its value in "real life." When students are given feedback on *how* to improve their performance, they should also be reminded about *why* making the effort to use that feedback will lead to self-improvement and goal attainment of personal goals.

6. *Personalized* Feedback

Students are more likely to attend to feedback and respond in a non-defensive manner if it's delivered in a personalized manner. This may be accomplished through such practices as (a) addressing the student by name when providing written feedback, (b) noticing something about the student (e.g., mentioning that you've noticed the student's increased level of involvement and participation in class), (c) signing your name at the end of your comments so that your written feedback simulates a personal letter, or (d) in a postscript to your feedback, asking about something you know is currently going on in the student's life (e.g., athletic endeavors or family matters).

7. *Positive* Feedback

Feedback becomes more balanced and less likely to damage students' self-esteem if it includes positive information, such as complimentary comments about specific aspects of the student's work. During the rush to correct and return tests or assignments as promptly as possible and justify to students why they have lost points and received a grade less than "A", it's easy to forget to take a moment to offer students' praise and encouragement. To guard against this "criticism trap," the following practices are recommended as strategies for delivering positive feedback:

"Positive feedback places emphasis on improvement and progress rather than on deficiencies and mistakes."
—Ginsberg & Wlodkowski, *Diversity & Motivation*

* In addition to pinpointing the sources of students' mistakes, make a conscious effort to identify aspects of their work that were done correctly or effectively (e.g., "You got most of this problem right; it's just this one part that we need to work on.")

* Acknowledge students' *strengths*, even if those strengths don't relate directly to the specific criteria used to grade their work (e.g., the creativity of the answers provided, or the care they took to answer all parts of all questions).

* Even if further improvement is needed, point out aspects of students' work that have *improved* during the course of the term, (e.g., you still have a little way to go but you've come a long way since the beginning of the term.")

Use a "forgiving" grading system that allows students to make up exams on which they performed poorly, or allow them to drop their lowest test score. These practices demonstrate instructor sensitivity to students who may be taking a test or completing an assignment while ill, stressed, or distracted by non-academic issues. Allowing students to drop their lowest performance score also has the advantage of reducing the need for instructors to construct and proctor make-up tests for students who missed the exam because the instructor can use the missed test as the student's lowest score and not count it toward the student's overall course grade. This practice is most appropriate for smaller tests (e.g., quizzes), rather than major exams that all students should be expected to complete. Used in this manner, the practice of dropping the lowest score will not unduly dilute the course's academic rigor or lower your grading standards.

Whatever particular way an instructor decides to implement a forgiving grading system, it will still send a strong signal to students that they have a caring instructor who is sensitive to the life circumstances and personal adjustments of students from diverse backgrounds.

Student learning is enhanced by exercises or assignments that promote *self-assessment* and *self-awareness.*

Self-assessment is a learning process that enables students to look inward and gain insight into themselves as learners, thinkers, and individuals in a diverse world (Broofield & Preskill, 2005). Instructors can promote this learning-for-self-awareness process by having students complete self-assessment inventories that require them to examine their (a) learning styles and learning habits, (b) educational and occupational interests, and (c) personal values, personality and wellness habits. Students may also be asked to keep time diaries or learning logs to promote self-awareness of how where their time and energy goes. These types of assignments encourage students to *engage* students in two important lifelong-learning habits: *personal reflection* and *self-examination*.

The educational impact of self-assessment and self-awareness assignments can be strengthened by the following practices.

Provide students with a *comparative reference point* so that they can interpret their results in relation to others. Self-assessment becomes more meaningful when students are able to view their individual results in relation to national norms (if available), class averages, or the averages of student subgroups in class (e.g., males and females; minority and majority students). Comparative self-assessment is an effective way to expose students to diverse perspectives and gain a frame of reference that can sharpen their self-awareness and self-insight.

To make the comparative-assessment process more involving and interactive, *score lines*, may be created whereby students line up in the order of their scores on a self-assessment instrument

or inventory. Instructors could complete the same self-assessment inventories along with their students and join the score line. Completing an exercise with students often increases their interest and motivation to partake in it. When students see their instructor doing what they're being asked to do, their participation is validated and they receive the message that the task is important enough for their illustrious instructor to complete as well. (Furthermore, students often extremely curious to see their instructor's results and how it compares with their own.)

As a *final, cumulative self-assessment assignment*, have students write a personal essay or autobiography that asks them to integrate and reflect on the results of separate self-assessments they completed throughout the term. To lend some definition and structure to this assignment, instructors could include focus questions that ask students to review their self-assessments for patterns that may reveal (a) personal *strengths and weakness*, (b) *consistencies* and *discrepancies* between their stated or espoused values and their enacted values, (c) their intentions and goals, (d) assets and resources available to them for realizing their goals, and (e) potential *blocks* or *barriers* that must be overcome to achieve their goals.

Intentional stimulate students' *intrinsic interest* in and *motivation* for completing tests and assignments.

The following practices may be used to promote student enthusiasm for and effort class *exams*.

Include test questions that relate to *current events* or that ask students to apply course concepts to contemporary, real-life situations (e.g., situations involving family relations, peer influence, or future educational choices and occupational choices). This practice serves to increase the probability that students will perceive the test as a relevant learning experience (rather than a grade-determination ritual). Assessment becomes "authentic" when it's connected to students life circumstances and frames of reference (Wlodkowski, 2008).

"Assessment that is culturally responsive illuminates the connection between knowledge as others have defined it and meaning that is relevant to individual experiences and belief systems."
—Ginsberg & Wlodkowski, *Diversity & Motivation*

Have students *construct and submit test questions* for possible inclusion on exams. This practice should increase students' intrinsic interest in the test and is likely to decrease test anxiety by increasing their sense of perceived control over the test situation (Thompson, 1981), and sends students the message that their instructor respects their ideas.

The following practices may be used to promote student enthusiasm and effort on class *assignments*.

Accompany assignments with a clear *rationale* indicating *why* you're asking students to complete them. By taking just a little time to justify assignments and articulate their value, students will be less likely to perceive them as mere "busy work." Relevant to this recommendation is research indicating that "writer's block" is more likely to occur on assignments that writers perceive to be trivial or insignificant (Rennie & Brewer, 1987).

Have students *reflect on the intended learning outcomes* for class assignments. This practice may be effectively implemented by including a final step for each course assignment that asks students to write a short, one-minute reflection on the intended learning outcome of the assignment and whether or not it was met.

When assigning projects or papers, try to provide students with a *topic menu* from which they may choose a topic that most interests or excites them. Providing students with choices about what they will learn increases their intrinsic motivation to learn by increasing their sense of self-determination—i.e., students perceive the source of their motivation as internal (within themselves), rather than external—i.e., being controlled or coerced to learn by outside forces (e.g., the demands of instructors or parents) (Deci & Ryan, 1991). Students who opt for the same topic could be grouped together to complete a team project on their topic of common interest.

Devise assignments that ask students to *apply* course concepts to relevant events occurring *on campus* or in *the local community* (e.g., by having students peruse the campus and city newspapers). Student assignments could be constructed that ask students to locate current events in the popular media and relate them to course issues (e.g., creating a collage or scrapbook comprised of course-relevant newspaper articles, pictures, and cartoons). Students could also peruse the classified section of the local newspaper to find an ad for a position that interests them in, and write a persuasive letter to prospective employers in which they articulate why they would be an ideal candidate for the position. Employers from the local community may be invited to class to discuss what they look for in a well-written letter of application.

"The closer assessment procedures come to allowing learners to demonstrate what they have learned in the areas where they will eventually use that learning, the greater will be their motivation to do well"
—Ginsberg & Wlodkowski, *Diversity & Motivation*

Create assignments that encourage students to *make connections across different topics or instructional units*. For example, students could be asked to relate ideas currently being discussed in a unit on diversity to material previously covered in a unit on American history. Encouraging students to make connections across topics is a teaching practice that is consistent with the principles of implements "brain-based" or "brain-compatible" learning, because the human brain is wired to seek patterns and make connections (Caine & Caine, 1991). In fact, learning itself is stored in the brain in the form of neurological connection between brain cells (neurons) (Cuseo & Thompson, 2010).

Periodically during the term, give students an assignment that asks them to *summarize or integrate* the most important concepts covered in the class up to that point. Synthesis represents one of the higher forms of thinking (Anderson & Krathwohl, 2001), and asking students to periodically reflect and connect ideas is an effective way to engage them in this higher-level thinking process. If done toward the end of the term, synthesis allows to gains a meaningful sense of "closure" that comes from "tying things altogether" and seeing the "bigger picture."