Assessment as Learning:
The Role of Minor Assignments in Teaching and Learning

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Abstract: *This article focuses on assessment at the level of the course and classroom, rather than the program or institution. The assumption that building a culture of assessment in a social work program, or its host university—assessment, understood as a "rich conversation about student learning informed by data" (Marchese, 2004)—requires that both faculty and students are engaged by assessment as an activity that directly benefits their own teaching and learning while these are in progress. Classroom assessment based on the frequent use of minor assignments— ungraded tasks set by instructors for students to perform in the classroom—offers this direct and immediate linkage of assessment to learning. The uses and advantages of minor assignments are described, and the dynamic interplay between minor assignments and assessment is illustrated with an example from the teaching of Social Security in a social welfare policy class.*

Keywords: Assignments, assessment, instruction technique

ASSIGNMENTS AND ASSESSMENT

Assessment has assumed growing importance in higher education, partly because of the pressure to show that increasingly expensive college education produces the results it claims in terms of student learning. The assessment movement in higher education has drawn attention to the gap that may exist between coverage—the material taught in a course—and what students learn (Huba & Freed, 2000). At the level of the individual classroom, this emphasis on accountability for outcomes has highlighted the need for summative assessment of student learning in terms of the course's objectives. This in turn requires well-designed assignments with clear grading criteria that test student attainment of the intended outcomes (Walvoord & Anderson, 1998).

The assessment movement and the demand for accountability also draw attention to the need for formative assessment to provide both students and instructor with ongoing feedback that enables them to adapt and improve their learning and teaching from week to week. Accrediting bodies, such as the Council on Social Work Education's Commission on Accreditation, require processes of ongoing program assessment and improvement as a permanent feature of programs, rather

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than as a surge of energy in the year before a site visit. Similarly, classroom assessment can be designed to provide frequent feedback to inform and improve teaching and learning as students' progress throughout a term, rather than as a burst of activity at the end. Assessment-centered teaching, which is also necessarily learner-centered (Bransford, Brown, Cocking, Donovan, & Pellegrino, 2000), thus emphasizes formative and summative feedback and focuses on what students learn as distinct from what the instructor "teaches." This latter distinction, drawing attention to the ways in which prior knowledge and preconceptions constrain as well as enable new learning, has been a central theme in the cognitive science of learning and expertise development in recent years and in the assessment movement in higher education (reference omitted; Bransford, et al., 2000; Daley, 1999; Palomba & Banta, 1999; Steadman, 1998).

Whatever their value or potential for program assessment, assignments are, in the first place, part of the process of evaluating student learning in an individual course. Assignments are the student tasks that teach and test those things the instructor most wants students to learn. That, at least, is the assumption students make when they direct their energies to learning what they need to know in order to do their assignments well. Assignments provide the raw material for assessment. Classroom assessment is not only concerned with evaluation of outcomes. It is also part of the process of student learning. This aspect of assessment has been called assessment-as-learning, the involvement of students in the metacognitive processes of assessing their own learning as it progresses (Gingerich & Kaye, 1997; Alverno College Faculty, 1994). As social work programs take assessment more seriously, two different but complementary tendencies are evident: the first is toward evaluation of student learning in terms of its ultimate utility for improving client outcomes in the field (Gambrill, 2001a, 2001b, 2002); the second is toward incorporating classroom assessment, peer- and self-assessment into the normal, everyday instruction of professional social work education that is organized around assuring that students develop and can articulate their mastery of the abilities they need for professional practice (Gingerich & Kaye, 1997; Adams, 2004; Fanney, 2003).

These developments point to the key importance of assignments, both major and minor, in course design and teaching strategy. An assignment is defined here as any student task set by the instructor that both teaches students and tests their learning. Shifting the emphasis from what the instructor must cover in a course to what a student should be able to do by completion of the course points to the need to move up the development of assignments in the design of a course (Walvoord & Anderson, 1998). From this assessment-centered and learner-centered perspective (Bransford, et al., 2000), it is preferable to design a course around the major assignments that teach and test the knowledge, values, and skills that the faculty (collectively and individually) most want students to learn. These are properly specified in a course rationale and in the course objectives for student learning that the faculty has approved while building a horizontally and vertically integrated curriculum. After the rationale and course objectives or student learning outcomes are in place, developing the major assignments becomes the first task of the instructor, rather than the last. These assignments, based on the objectives, link

the desired learning outcomes to the course's structured opportunities to learn and assess them. Walvoord and Anderson (1998) provide a step-by-step guide to constructing an assignment-centered course outline that begins with the major assignments and selects them for the likelihood of their eliciting from students the kind of learning the instructor wants to measure.

Designing a course around the major assignments has at least two results. First, assignments are unlikely to be clustered at the end of the term, a practice that creates an undue burden on teachers and students, alike. If assignments and assessment are understood to be part of student learning rather than serve only as a means to evaluate it after the fact, they are likely to be shorter and less formal. A single policy analysis assignment, for example, that is due at the end of term can be broken up into several steps. Indeed, policy analysis frameworks lend themselves to this approach, because they are typically divided into steps or clusters of questions to be addressed sequentially (e.g., Bardach, 2000; Dunn, 2004; Gilbert & Terrell, 2002; Karger & Stoesz, 2002). The instructor and peers can give feedback on each part—without grading the work, while the student is still learning and revising—and the student can rewrite as she improves her skills. Such short, well-sequenced assignments build students' skills as well as assessing them. They also provide opportunities for self- and peer-assessment that can build metacognitive skills—learning how to learn—as well as helping the instructor provide more helpful feedback while the student develops an improved final product (Kusnic & Finley, 1993).

Second, minor or small-scale assignments also assume a new importance. As the course progresses, these assignments teach and assess what students need to learn to do in order to complete the major assignments successfully and, thereby, show students that they have achieved the learning outcomes of the course, which, in a well-designed curriculum, support mastery of the abilities students' need for professional social work practice.

WHAT ARE MINOR ASSIGNMENTS?

Major assignments, as we have seen, can be divided into smaller, more frequently assessed parts in order to allow for several iterations on the path to a final product. Minor assignments are on a smaller scale still. They are the small classroom tasks—usually ungraded and often anonymous—that provide feedback to both students and instructor on how they can improve their learning and teaching in progress. They support completion of the major, graded assignments by building the knowledge, values, and skills that those major assignments test, but they are not themselves part of or early drafts of those assignments. Minor assignments provide the instructor with data for assessing student learning, but they are not necessarily intended for measuring the performance of individual students.

The briefest and perhaps most useful minor assignments are Classroom Assessment Techniques (CATs). These are "small-scale assessment techniques that provide information to teachers and students about what is going on in the classroom" (Palomba & Banta, 1999, p. 168). They were collected, developed, refined by Angelo and Cross (1993) as part of a larger Classroom Research Project involving several thousand college teachers in a wide range of disciplines and

professional fields. The purpose of CATs is "to improve learning *in progress* by providing teachers with the kind of feedback they need to inform their day-to-day instructional decisions, and by providing students with information that can help them learn more effectively" (Angelo, 1994, p. 5). The student tasks required by CATs are assignments on the smallest scale, usually taking only a few minutes during or at the end of a class session.

Brief as they are, CATs teach as well as assess. For each of the 50 CATs described and illustrated by Angelo and Cross (1993), the authors list the related teaching goals that the technique supports. For example, the simplest of CATs, the Muddiest Point, asks students in the last few minutes of class to describe on a half-sheet of paper or card the least clear point in the preceding class period or unit—lecture, discussion, video, or assignment. Its purpose is to guide teaching decisions about what to emphasize, clarify, or spend additional time on. Students learn quickly to identify and articulate what they do not understand (Angelo & Cross, 1993). Like many CATs, this technique requires and develops skills in metacognition, enabling students to become more conscious of and to take control of their own learning. As Angelo and Cross (1993) describe, the technique also supports several teaching goals in their Teaching Goals Inventory, an extensively field-tested and refined instrument for self-assessment of instructional goals for college teachers. The goals related to the muddiest point technique are:

- Improve skill at paying attention.
- Develop ability to concentrate.
- Improve listening skills.
- Develop appropriate study skills, strategies, and habits.
- Learn concepts and theories in this subject

                                                          Angelo and Cross, p. 154

Some techniques, such as Classroom Opinion Polls (an informal but anonymous poll of student opinion) and Everyday Ethical Dilemmas (which asks students to respond to a scenario involving a realistic ethical dilemma that they might encounter in practice), both foster and assess students' awareness of their own attitudes and values. Both can be administered as pre- and post-assessment devices to ascertain what changes occur as a result of classroom activities and assignments. (For a fuller discussion of CATs, their theoretical and empirical basis, and their application to social work education, see Adams, 2004; for a meta-analysis of the empirical research literature on CATs, see Becker, in press.)

Other minor assignments—such as role plays and simulations, or in-class small group tasks—typically take longer and are more clearly designed to teach than assess. They too, however, provide the instructor with feedback about student learning that can be used to improve both teaching and learning in the course, while it is in progress. All these classroom activities are given the name minor assignments to emphasize that they all: (1) are tasks assigned by the instructor, (2) facilitate learning needed for successful completion of the major assignments, and (3) enable both the instructor and students to assess student learning on a frequent and regular basis, allowing for improvements in teaching and learning

while the course is still in progress. Drawing on learning theory and empirical studies on the structure of knowledge, novice and expert learning, problem solving, development of learning in children, self-assessment, and the role of culture in learning, these activities provide for a learning environment that is focused on the course objectives while promoting metacognitive skills for lifelong learning (Adams, 2004; Boitel, 2002; Bransford, et al., 2000).

THE MUDDINESS OF ASSIGNMENTS

The Muddiest Point typically focuses on a particular lecture (Mosteller, 1989) or specific component of a class (discussion, video, etc.) and is intended to elicit feedback about the content of that component. In an analysis of muddiest points collected weekly from several classes over the course of an academic year, the author found that asking the general question, "What was the muddiest point in this class session?" did, after some coaching to go beyond such unhelpful answers as "everything" or "nothing," produce responses that illuminated the substantive elements in each class session that remained unclear. For example, the muddiest point for several students in a policy class session was the concept of regressive taxes, or more specifically, what was regressive about a sales tax when everyone paid the same amount of tax on a given purchase and the rate was the same on all taxable goods and services. But students also took the opportunity to ask questions about the major assignments. What was muddy to these students was what they were expected to know or be able to do. This was a variant of the much-despised question, "Will it be on the test?" or "What do I have to remember?" and initially elicited the irritation instructors, who love their subject traditionally feel, when confronted with this question.

   Eventually, however, the attempt to persuade students not to use the Muddiest Point device to ask such questions was abandoned. This feedback posed a legitimate question—what do you expect us to know? It pointed to the overwhelming volume of unfamiliar material a student is expected to master in a foundation policy course that includes the history of social work and social services, current policies, service delivery structures, policy analysis, policy practice and advocacy, and financial, organizational, administrative, and planning processes pertaining to service delivery (Council on Social Work Education, 2002). It also indicated the inadequacy of such answers from the instructor as "all of it" or "the main points."

ADVANTAGES OF MINOR ASSIGNMENTS

An important advantage of minor assignments as assessment is the flexibility they allow in adapting teaching and learning strategies in response to the feedback they provide. Major assignments are typically written into the syllabus that students receive at the beginning of the term and, thereby, assume a contractual quality that leaves limited room to maneuver. Minor assignments, on the other hand, allow instructors to change their teaching strategy and combine assignments and assessment techniques so as to take advantage of opportunities created by feedback from prior assignments or address the problems of teaching and learning that come to light in the course of the term. The adoption or adaptation of new minor assignments and their combination in unanticipated ways makes for lively, responsive teaching.

The Muddiest Point, for example, can be the organizing element of an ongoing weekly dialog. The instructor can respond to the class by e-mail or on a class electronic discussion board to clarify points about the content or the assignment that were unclear. The distinction between policy and program in a major policy analysis assignment, for example, or between obsession and compulsion, or race and ethnicity, may need repeated clarification and exemplification before all students are clear about it.

The first part of each class can also be used to clarify muddy points and provide linkage between the previous and current class. Other CATs or minor assignments can be used to stimulate recall and critical thinking about the content of the previous class. The technique called RSQC2 (Recall, Summarize, Question, Connect, and Comment) offers a five-step protocol for guiding students through a process of quickly recalling, summarizing, analyzing, evaluating, and synthesizing content from the previous class session (Angelo & Cross, 1993). Students write down quickly what they recall from the previous week, summarize the important points into a single sentence, jot down a question that remains for them about the previous class, connect the main points of that class with the objectives of the course as a whole, and finally make an evaluative comment about the previous class session. This process enables instructors to compare their own sense of what they are teaching with what students are remembering and understanding. It gives students a framework for organizing and integrating their new learning, pushing them to manage their efforts well and develop good study habits and skills.

The questions students raise in doing the RSQC2, the Muddiest Point, or the Minute Paper—which asks students to jot down on an index card: a) the most important point of a lecture or reading, and b) what important question remains unanswered—do not necessarily need to be answered by the instructor. If the class is divided into small groups to compare their unanswered questions, only those questions the group cannot answer internally need the instructor's clarification. Thus, students have the opportunity to compare among themselves what they thought was most important and answer each other's questions, while the instructor focuses on what he or she alone can teach.

Tebo-Messina and Van Aller (1998) illustrate in a case study how classroom research can be joined with program assessment and some CATs, like the Muddiest Point, lend themselves to research across sections, courses, and programs that can improve teaching by identifying the most common misconceptions and misunderstandings in a particular curricular area. Nevertheless, such minor assignments and assessment tools have the practical advantage of adoptability by one or a few faculty members with or without wider utilization or support at the departmental level or above. Instructors have found them intrinsically rewarding in a variety of educational settings (Catlin & Kalina, 1993; Cross, 1998; Light, 1990; Steadman, 1998). They offer immediate rewards to teachers and their students in terms of feedback that can lead to immediate improvements in teaching and learning, while supporting a culture of assessment as an indispensable aspect of professional faculty responsibility for student learning rather than as a tool of managerial surveillance and control of individual faculty members (Angelo & Cross, 1993).

READING AND CHUNKING

Required reading constitutes perhaps the most problematic kind of assignment. It is in itself only a partial assignment—a task the student carries out that teaches what the instructor wants students to learn. But the testing of that learning requires an additional assignment or examination. Frustrated instructors some-times view the purpose of multiple choice or similar tests as "making students do the reading." That, however, is not typically a student-learning outcome, but a means to achieve other objectives. The *direct* link between major assignments and course objectives is thus broken or attenuated. For their part, students may be frustrated with a large textbook replete with thousands of discrete facts that they are expected to recall for a test. They naturally want to know what of this mass of unfamiliar material they are expected to remember.

It would be a mistake, however, to substitute the mastery of analytic skills for the learning of factual content. Students *need* to master a substantial body of factual knowledge in order to develop analytic skills. As the recent National Research Council's review of the research on *How People Learn* (Bransford, et al., 2000) argues, "The ability to plan a task, to notice patterns, to generate reasonable argu-ments and explanations, and to draw analogies to other problems are all more intertwined with factual knowledge than was once believed" (p. 16). But students unfamiliar with a field such as social policy or human behavior and the social envi-ronment lack the organizing frameworks, concepts, and prior knowledge that would enable them to learn large amounts of material in these areas as an expert would (Bransford, et al., 2000).

At least two contrasting approaches are available to instructors in face of this challenge. One is to try to enforce prodigious feats of memorization on students through appropriate tests. The other is to help students acquire learning with understanding by focusing on the "big ideas"—key concepts, organizing themes— that will enable them to see patterns and relationships in what at first appears to be a mass of disconnected facts. As research on differences between the learning of novices and that of experts indicates, the ability to "chunk" information in this way, to cluster it into meaningful patterns—and not superior memories—is what distinguishes expert from novice learners (reference omitted; Bransford, 1979; Bransford, et al., 2000; Chi, Feltovich & Glaser, 1981; Miller, 1956).

From the second perspective, assignments that support required reading then need to teach and test learning with understanding. Assessments that measure propositional knowledge alone and emphasize accurate memorization may inad-vertently direct student effort to decontextualized remembering rather than understanding. This, in itself, makes remembering harder, even if the reading explains key concepts and "big ideas" that would enable students (if they were able to apply them) to organize new learning into interrelated conceptual chunks and retrieve it without undue effort.

Sometimes, students see the solution in terms of more work on the part of the instructor to "predigest" the reading—providing a summary of key points in advance, for instance, summarizing them again at the beginning of class, and organizing the class itself as a lecture that goes over the substance of the reading.

This approach does little to build student skills in conceptualizing and synthesizing, and it is perhaps reasonable to suspect that this method does less to "make the students read" than it does to render reading superfluous!

CATs are particularly useful in addressing this problem. They can be used to foster—and enable instructors to assess—student progress in integrating and synthesizing new information, articulating key concepts, and using them to organize new knowledge. RSQC2, for example, can be used at the beginning of a class to encourage students to identify the key points of an assigned reading, to pose a question that the reading left unanswered for them, and to connect it to the objectives of the class. The summarizing part of this technique can be used on its own, as a One-Sentence Summary. Students are given the task of answering the questions, "Who does what to whom, when, where, how, and why?" and then synthesizing "those answers into a single informative, grammatical, and long summary sentence" (Angelo & Cross, 1993, p. 183). This minor assignment builds student skill in chunking, as it provides the instructor with feedback about the range of student understanding of a required reading in a class.

USING THE FEEDBACK FROM MINOR ASSIGNMENTS: AN EXAMPLE

Although minor assignments are not normally graded and do not identify individual students for particular instructional intervention, they do provide valuable feedback for instructors regarding student learning. Reporting that feedback to the class affords an opportunity both for the class to reflect on student learning, difficulties, assumptions, values, and opinions, and for the instructor to account for his or her own use of the feedback to improve instruction. Minor assignments, as argued, allow for a kind of responsiveness and flexibility that preset major assignments may not. The feedback minor assignments provide makes it possible to develop new minor assignments, add or refocus lecture material, or arrange for a guest speaker or video not previously planned. A brief account of the author's teaching of social security over three class sessions in an undergraduate social policy course offers one example of how this can work. The process described here has been replicated with minor variations and similar results in five sections of an MSW policy course over three years.

Social Security exemplifies all the key challenges of relevance, content, and prior knowledge facing teachers of social policy to social work students (Adams, 2004). It does not seem relevant or applicable to the direct practice with individuals and families, which is most students' main focus of interest. As a Federal program, social security does not lend itself readily to a policy-practice curriculum focused on legislative lobbying at the state level. The program is complex, with many provisions and technical terms that are unfamiliar to most students. On the other hand, students bring to the topic prior knowledge and preconceptions that may be partial, inaccurate, and serve as a barrier to new learning (Adams, 2004; Bransford, et al., 2000; Behr, Harel, Post & Lesh, 1992; Confrey, 1990; Mestre, 1994; Minstrell, 1989; Silver, Shapiro & Deutsch, 1993; White & Frederickson, 1998). The instructor has to address all these challenges in order to be effective.

In order to assess students' response to the assigned reading on social security, a Reading Rating Sheet (Angelo & Cross, 1993) was used. Students were asked to

respond to three multiple-choice questions about how well they had read the assignment, how useful it was in helping them understand the topic, and how clear and understandable the reading was. A fourth question asked whether the student would recommend the reading to a friend (and why or why not), and the final question inquired, "What did you learn from it that you want to make sure to remember?" This assessment technique invited students to reflect metacognitively on what use they had made of the reading, while giving the instructor feedback on student responses to it. One striking response to the anonymous rating sheet was from a student who would not recommend it to a friend, because "All my friends watch videos."

Before giving a lecture on social security, the instructor administered a modified form of Directed Paraphrasing (Angelo & Cross, 1993). Students were asked to define social security in one or two sentences, addressing themselves to clients, their families, or professionals in other fields. As a prompt, the first sentence was started for them: "Social security is…." The instructor added to this exercise the instruction to "describe two or three facts about social security or beliefs you have about it that you believe others should know or share."

Students compared and discussed their responses in small groups and reported their most frequent responses and recurring themes. By far, the most common response was that the program "would not be around" for them. This was important feedback, though unsurprising in light of reports that young people are more likely to believe in UFOs than in the prospect of ever receiving social security benefits (DiNitto, 2003). It revealed that, despite reading a text that challenged both these assumptions, most students saw social security as a program solely for elderly people and did not believe it would survive into their own old age. But this view—the prior knowledge and preconceptions students brought to the subject—not only survived contact with the reading, it also reinforced students' sense that this content was irrelevant to their personal lives and (since few intended to work with aging persons) to their future professional practice as well.

The instructor was able to use this feedback to shape the lecture and classroom activities that followed, not in order to disprove students' assumptions about the future of social security, but to call into question the arguments and evidence on which they were basing them, to make them available to students for their own critical examination.

In lecture, the case of Germany was discussed, where the country's social insurance program, unlike other financial institutions, survived depressions, hyperinflation, two world wars, and several regime changes.

A brief op-ed piece from *The New York Times* called "Survivor Security" (Altman, 2001) was distributed and discussed in small groups. The author describes in it how social security helped the families of the victims of September 11, providing benefits to surviving children, which would continue every month until their late teens. The article not only emphasized the non-retirement aspects of social security in this dramatic way, it also argued that with minor adjustments, the retirement of baby boomers was readily affordable and that social security could be put on a sound financial footing for the foreseeable future—again, reinforcing arguments that were supported in detail in the assigned reading.

Students next completed a 10-question quiz, taken from the Social Security Administration's (1998) set of teaching materials for high school students. The quiz, like the lecture, focused on the basic principles—the "big ideas"—underlying the program. Rather than provide the answers, the instructor directed students to the Social Security Administration's website (www.ssa.gov), where the quiz and answers were available online in the Youthlink section. At the next class session, students reported their surprise and humility in finding that they did not do better at a test designed for high school students on material they had just covered. This assignment, though ungraded and anonymous, both created an information gap that students were motivated to fill and reinforced their learning of the basic principles of the social security program.

With this information and a new openness to learning about the program, students were asked in small groups to design a video for high school students. They were asked to discuss both the presentation of the material—use of music, dramatization, narrators, and so forth—and the key points about the program that they wanted to make to young people. This minor assignment was suggested and legitimated by the unenthusiastic student's comment that his or her friends all watched videos (and did not read more than they had to). Each group reported its design for a video and the points were summarized on the board for the class as a whole. Finally, the class watched the Social Security Administration's own video for high school students, Reel Security (1998b), then compared their own designs and key points with those of the Federal government.

Although some of these students were more familiar with a teaching format emphasizing lectures, readings, and multiple choice tests to enforce and assess memorization of both, they responded well to this more active and adaptive approach. Despite their initial lack of enthusiasm for the topic, at the end of term they rated it—equally with their working visit to the state legislature—as the most interesting part of the course and the one from which they learned most. Their final essay examination confirmed their impression and showed that the students had learned to reexamine the ideas they had formed from popular sources about the most important program in the American social welfare system and were able to explain and apply their new knowledge. They had actively and self-reflectively engaged in the learning process and had become both conscious and critical of the assumptions and beliefs they brought to the subject.

LIMITATIONS AND CHALLENGES

Classroom Assessment Techniques and other classroom activities that we have referred to here as minor assignments are widely used and there is evidence of both student and instructor satisfaction with them and increased class participation (Adams, 2004; Angelo, 1991; Catlin & Kalina, 1993; Steadman, 1994, 1998). Less clear, however, is their relation to improved student learning outcomes. Becker (in press) conducted a meta-analysis and critique of quantitative studies employing inferential statistics to assess CATs and other active-learning strategies. He found many methodological problems with existing studies and proposed criteria for future research. He concluded for the present that active-learning strategies do not demonstrably improve learning outcomes but that there is evidence to support

the hypothesis that periodic use of CATs like the (best researched) 1-Minute Paper does increase student learning. Further and more rigorous research is needed before much can be said with confidence about the relation of CATs (or still more, minor assignments in general) to student learning outcomes.

The disadvantage of CATs most widely cited by faculty is the time required to design, administer, analyze, and report back to students on the findings (e.g., Steadman, 1994, 1998). Catlin and Kalina's (1993) study, using both questionnaire and interview, found a discrepancy between faculty and student perceptions of improved student metacognition. Their finding suggests the importance of taking the time to repeat particular CATs and to explain their potential for transfer to other learning contexts in order to improve study and learning habits. In short, we may conclude that although CATs, the least time-consuming of minor assignments, take only a few minutes at the beginning or end of class to administer, they require a substantial investment of instructor time in and out of class to be used well.

Foundation courses in social work education, however, necessarily cover a great deal of content and time that is at a premium. The regular use of minor assignments in the ways suggested here probably cannot be achieved as an add-on but require changes in teaching strategies and use of classroom time. Assumptions about content need to be re-examined. For example, how much content has to be covered in class as opposed to in readings and research for major assignments? Is superficial coverage of extensive content in class a waste of time if students do not retain or apply it (Bransford, et al., 2000)? In addition, CATs and other techniques may, themselves, be used to address the challenge of content as Adams (2004) illustrates for the case of social welfare policy teaching.

CONCLUSIONS

As the Social Security example described above suggests, frequent and flexible use of minor assignments, whether Classroom Assessment Techniques, such as Directed Paraphrasing or improvised group tasks like designing a video on social security, provides information about student learning that can be used to improve instruction as the course progresses. It can make for a dynamic, interactive, and learner-friendly classroom environment that encourages active learning, metacognition, and critical thinking.

Taking major assignments seriously, as Walvoord and Anderson (1998) argue, involves organizing courses around them, so that the assignments teach and test what the faculty most want students to learn. This, in turn, places a new importance on those minor assignments and formative assessments that enable students and instructors to foster and assess new learning. Minor assignments identify the often unrecognized assumptions and preconceptions that hamper learning, enabling the instructor to expose them to evidence and analysis while there is still time. Minor directed assignments identify the often unrecognized assumptions and preconceptions that hamper learning, enabling the instructor to expose them to evidence and analysis while there is still time. Instructors can use them to check their own idea of what they are teaching against what students are learning. This enables instructors to improve their teaching as it progresses during a course

and provides students with opportunities to improve their thinking and learning (Vye, et al., 1998). Minor assignments build and assess the knowledge, values, and skills students need to complete the major assignments successfully, that is, to master the abilities the course sets out to teach.

Minor assignments, used as assessment and teaching techniques, do not require buy-in by whole faculties or even administrations. Individual faculty members can adopt them for their own teaching and later, excited by their experience, discuss, collaborate, share, and analyze data across sections, courses, or programs. CATs and related approaches to assessing student learning in the classroom may thereby contribute to building a culture of assessment rooted in the professional and personal interest of faculty in effective teaching and student learning rather than in reluctant response to accountability pressures from above or without. They may, in the process, serve higher-level assessment goals designed to respond to those pressures whether or not they are used directly in program or institutional assessment.

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