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Educational Connoisseurship, Criticism, and the Assessment of Integrative Studies

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Abstract: How we might help students "synthesize" or "integrate" and then assess the process has continued to perplexed educators. This paper examines how "educational connoisseurship" and "educational criticism," as described by Elliott W. Eisner, may be applied to this complex task. First I review the suggestions made by Benjamin S. Bloom and his committee of college and university examiners in 1956 and point out some of the difficulties in using "primary trait analysis." I then explain some ways to apply Eisner's model and suggest four additional ways that educators might apply the philosophy inherent in Eisner's approach to develop students' ability to synthesize: Use of Exemplars, Team Assessment, Control of Time and Timing, and Student Involvement.

HELPING STUDENTS TO DEVELOP the "ability to synthesize or integrate" (Klein 1999, p. 19) often is cited as one of the desired outcomes of an interdisciplinary course or program. What this means and how it can be achieved and assessed has continued to perplex educators. L. Thomas Hopkins and his associates (1937) wrestled with it in the 1930s, as did the committee of distinguished educators who wrote the 57th yearbook of the National Society for the Study of Education (Henry 1958).

In more recent times, Klein and Newell have stated:

> In *interdisciplinary* courses, whether taught by teams or individuals, faculty . . . make a concerted effort to work with students in crafting an integrated *synthesis* . . . that provides a larger, more holistic understanding of the question, problem, or issue at hand. (1997, p. 404)

They elaborate as follows:

> Achieving synthesis requires proactive attention to process. That means examining how the elements to be synthesized are obtained and interrelated. The skills involved are familiar ones: differentiating, comparing, and contrasting different disciplinary and professional perspectives; identifying commonalities and clarifying how the differences relate to the task at hand; and devising a holistic understanding grounded in the commonalities but still responsive to the differences. (p. 406)

"Synthesize." "Integrate." "Holistic understanding." These are some of the words we attach to an extremely complex mental process. How can something this complex be described and assessed? Can it be broken down into sub-skills or competencies, or is some kind of global evaluation the best we can hope for at this time? In this article we consider whether professor and interdisciplinarian Elliott Eisner's conception of "educational connoisseurship" and "criticism" may be useful in this complex intellectual function.

What Is "Synthesis"?

In common parlance, synthesis is defined as "the combining of the constituent elements of separate materials or abstract entities into a single or unified entity (opposed to analysis)" (*Random House Dictionary*). Similarly, synthesis was defined as "the putting together of elements and parts so as to form a whole" by Benjamin S. Bloom and his committee of college and university examiners in 1956 (p. 162). They chose synthesis as the fifth level of their *Taxonomy of Educational Objectives, Cognitive Domain* which no doubt remains the most widely used formulation of educational objectives in that domain.[1]

The committee chose to distinguish three different types of synthesis, primarily on the basis of the product. They also cited illustrative educational objectives and test items for each category. For example:

5.10 Production of a unique communication.
Skill in writing, using an excellent organization of ideas and statements.

5.20 Production of a plan, or proposed set of operations.
Ability to integrate the results of an investigation into an effective plan or solution to solve a problem.

5.30 Derivation of a set of abstract relations.

> Ability to perceive ways in which experience may be organized to form a conceptual structure. (pp. 168-184)

In discussing "related concepts and processes," Bloom's committee recognized that all thought involves some elements of both synthesis and integration. As they put it, "*every* experience involves a combination of parts of previous experience with the present in such a way that the organism is permanently changed, however slightly" (p. 165). However, they concluded that, because of the very pervasiveness of this process, it would not help them to draw distinctions among different forms of cognitive behavior.

The committee also recognized that synthesis "is the category in the cognitive domain which most clearly provides for creative behavior on the part of the learner." But they were quick to point out:

> However, it should be emphasized that this is not completely free creative expression since generally the student is expected to work within the limits set by particular problems, materials, or some theoretical and methodological framework. (p. 162)

And is not all learning "creative" in the sense that the understanding or reorganization of experience is novel for that individual learner? The committee acknowledged this, but pointed out: "Other writers, particularly sociologists and anthropologists, would prefer to restrict the meaning of 'creativity' to the production of something new, unique, and original in human culture—the traditional meaning" (p. 165).

The committee recognized that creative self-expression in such fields as literature, fine arts, music, and drama also "represent synthetic processes to the extent that they require the individual to organize ideas into new patterns. . . . However, many do not qualify because they emphasize expression of emotional impulses and physical movements, rather than organization of ideas" (p. 165).

Thus did the 1956 committee try to delimit the concept of synthesis and to define it in terms useful for assessment. The matter is far from settled, of course. Consider, for example, David Sill's 1996 article "Integrative Thinking, Synthesis, and Creativity in Interdisciplinary Studies." He explores how theory, research, and experience in the development of creativity can enrich interdisciplinary studies and contribute to the development of "integrative thinking" or synthesis.

Assessing Synthesis

It may be that some day the sub-skills of synthesis will be analyzed and described with sufficient precision to be assessed with reasonable reliability and validity. However, the doubts raised by Bloom and his committee in 1956 are still worth considering today:

> Exercises involving synthesis often yield rather complex products for which objective criteria of evaluation are lacking. A new poem, a new musical piece, or a new design may defy evaluation. Who is to pass judgment on the quality of the product and by what standards? In the absence of an objective standard such as an external framework, theory, or the like, the examiner may have to rely heavily upon the opinions of competent judges. Check lists and rating scales should be especially useful here, but the examiner ought to insure that they do not emphasize elements of the product to the neglect of global qualities which, after all, may be more fundamental in any synthesis. (p. 174)

Some of these global approaches are quite familiar, such as the "stacking" method of rating student essays. In this process, each student's paper, project, or even complete portfolio is compared with all the others in the same class. Papers are placed in several stacks, usually three to five, with all the papers in one stack receiving the same grade or rating. These grades or ratings may then be weighted and combined with other factors to arrive at a student's composite grade for the course.

Primary Trait Analysis

Ability to synthesize is not the only desired outcome of interdisciplinary programs, of course. Student papers, projects, and portfolios provide clues to everything from "tolerance of ambiguity and paradox" to the ability to write a coherent sentence. "Primary trait analysis" is the process of identifying the most important elements or sub-skills evident in a particular student paper, project, or performance. Each of these elements is graded or rated separately, making it possible for a faculty member or team to identify each student's specific areas of strength or weakness. This information is essential for guiding that student's improvement, and when aggregated for an entire class, it reveals which course objectives may need further emphasis. If further aggregated by an entire team or department, these data can be invaluable guides to the improvement of curriculum and instruction (see Walvoord & Anderson

1998, Eder 2000).

Rubrics

The subjectivity of this process is obvious, whether applied globally to an entire term paper, for example, or to each of the sub-skills being assessed within it. Assessment specialists offer several suggestions to help raters reduce the more common sources of bias, such as fatigue. However, no refinement of procedure can hide the fact that each instructor brings to the task a unique set of criteria and expectations. These should be made explicit for the benefit of both the instructor and the students. *Rubrics*, as these sets of criteria often are called, help faculty to apply them more consistently and are best developed by teams of faculty or even by faculty and students.

The task is especially difficult for a complex process like synthesis. The rubric proposed by Don Stowe in the *Second Annual Report of the AIS Assessment Committee* (Association for Integrative Studies 2000, p. 18) may be seen as a contemporary refinement of the rating scales mentioned by Bloom's committee (see Appendix A). Such a rubric is helpful in comparing different students' products or performances, but the use of qualifying words like "rich," "more informative," "rudimentary," or "superficial" reveal that it hardly qualifies as an "objective standard." And heaven help us if some exterior agency ever mandates that our students must demonstrate synthesis at a specified performance level!

Of course, we should seek to increase our consistency in applying a rubric. This can be done if evaluators occasionally get together to practice rating on the same examples. Statistical procedures may be used to measure and monitor "inter-rater reliability," i.e., the consistency with which individual raters arrive at the same result for the same performance. Team assessment delivers even greater consistency but is obviously very time-consuming because all members of the team must examine each student's performance.

When used, students may grudgingly accept subjective, holistic approaches in assigning grades within an individual course. But when stakes are higher, as in exit examinations, more serious questions arise. Here it is important for all faculty members to use the same rubric to assess student ability to synthesize.

When an institution is judging the effectiveness of an entire program, faculty ratings could be combined to yield a "synthesis factor" for the entire program. Comparing student ratings taken early in the program with their ratings near the end of the program would indicate whether the program

is adding to their competence.

The challenge becomes even greater if the program is being reviewed by some outside agency, such as a board of regents or an accrediting body. In this situation, institutions nearly always call in outside experts to review and evaluate whatever data result from an institutional self-study. The competence of these outside evaluators is crucial, especially for programs that differ from the norm. Programs designed to promote synthesis are rare, and potential evaluators who have some grasp of that concept and experience in its cultivation are rarer still. Of all the program review models described by Conrad and Wilson (1985), it would appear that the one most appropriate for evaluating an interdisciplinary/integrative studies program would be the "connoisseurship model" based on the work of Elliot W. Eisner.

The Connoisseurship Model

Eisner is a professor of art and education at Stanford University. For decades he has applied the concepts of "connoisseurship" and "criticism," familiar in the world of arts, to the study of educational practice (1998). He defines connoisseurship as the ability to make fine-grained discriminations among complex qualities. Criticism is the connoisseur's disclosure of those perceptions "so that others not possessing his level of connoisseurship can also enter into the work" (1975, p. 1). S/he does this through description, interpretation, evaluation, and "thematics" (identifying dominant features or pervasive qualities).

Since validity is bound to be an issue in such matters, Eisner describes three ways that educational criticism can meet reasonable standards of credibility:

> 1. "Structural Corroboration"—triangulation, support from other types of data
> 2. "Consensual Validation"—agreement among "competent others"
> 3. "Referential Adequacy"—extent to which criticism reveals what might otherwise be overlooked. (1998, pp. 110-114)

In short, through criticism the connoisseur reveals the complexities of the educational enterprise and reeducates others' perception of it. The primary aim is to bring about improvement, not just accountability.

Conrad and Wilson (1985) included the connoisseurship model in their description of ways to carry out a program review. They asserted that the connoisseurship model differs markedly from other approaches. The "con-

noisseur" becomes the "catalyst" for evaluation and the "primary instrument of measurement," as well as guiding the data collection, analysis, and interpretation. Although connoisseurs or evaluators may be expected to consider guidelines and criteria, the standards used in reaching their judgments "derive primarily from their experience as professionals and upon the collective experience of the profession" (p. 29). Individuals sufficiently qualified to have this much responsibility are bound to be rare.

Assessing Student Efforts at Synthesis

Since few of us can hope to become connoisseurs/critics, how might we apply that concept to our own efforts to develop and assess our students' ability to synthesize? It seems to me there are at least four approaches: use of exemplars, team assessment, time and timing, and student involvement.

Exemplars

Since cloning existing connoisseurs/critics is not yet feasible, we could ask those who are expert in the assessment of synthesis to rate a few exemplars of student work. Of course the exemplars all must address the same problem or issue. The rest of us could use these to calibrate our perceptions from time to time. Exemplars have long been used to guide teachers when judging student handwriting or essays.

This approach was used by the State of Connecticut to illustrate the quality of high school student responses to open-ended questions on the state's Academic Performance Test (Connecticut State Department of Education 1995). The 1995 administration included an Interdisciplinary Assessment. It was designed to reveal students' ability to "think critically, solve problems, make decisions and communicate their ideas to others . . . in a realistic and interdisciplinary context." They were expected to "use knowledge and skills they have gained through their social studies, science, mathematics, language arts and other classes" (p. 3). Responses were scored according to a six-level rubric, and handwritten examples of student work at each level were published for the guidance of students, teachers, parents, and the general public.

Team Assessment

Eisner (1998), Walvoord and Anderson (1998), and others remind us that subjective judgments are inevitable in assessment, no matter what kind of test, rating scale, or other assessment procedure is used. The critical factor is the person making the assessment, especially involving a complex process like synthesis. Team assessment of student integrative thinking would seem

to be essential, especially at important points, such as at the time of exit from an interdisciplinary studies program. By working together, sharing our expertise with colleagues and students, and continually reflecting on our efforts, we may improve both the reliability and validity of our assessments and evaluations.

Incidentally, even in team assessment, a concept as complex as synthesis probably cannot be evaluated with a high degree of precision. Three levels of performance may be the best that can be assessed with a reasonable degree of reliability. And no pluses or minuses, please!

Time and Timing

It takes time to assess something as complex as synthesis. Therefore, student-faculty ratios should be as low as possible, cohort groups and year-long learning communities should be encouraged, and summative assessment of complex outcomes like synthesis should not be done too often, perhaps at entry into the program, at some reasonable mid-point, and at the conclusion of the program.

Student Involvement

Walvoord and Anderson (1998), among others, suggest that faculty involve students in establishing criteria for student work. Students may be invited to propose modifications of rubrics presented by faculty, or even to create rubrics of their own. Advocates of curriculum integration in pre-college settings, such as Beane (1997) and Vars (1993), go even further. They assert that students should be invited to join with faculty to both develop and assess skills such as synthesis. To begin with, the exemplars used by a faculty team to improve their inter-rater reliability might be shared with students to help them understand the ramifications of synthesis. If sufficient trust has been established, students may even be invited to assess the work of their peers. Above all, student self-assessment should be encouraged at appropriate points in the course or program.

Student motivation is enhanced when they are more deeply involved in the entire learning/evaluation process. Involvement also reduces the temptation to plagiarize, especially acute in assessing synthesis because originality or uniqueness is such an important factor. The Internet has made plagiarism incredibly easy. Even faculty considered connoisseurs may not always recognize it, so as many people as possible should scrutinize student work. This is another argument for team assessment at critical points. Perhaps the same Internet that makes plagiarism easy could be used to send excerpts

from suspected work to colleagues at other institutions for verification.

Conclusion

If teaching is an art, there should be artistry in the assessment of the products of that art. Of course, critics are not universally loved in the art world, but they do often help us to see and appreciate the products of synthesis/creativity. In that sense, let us all strive to become critics, not only of our students' efforts, but also of our own.

***Biographical note**:* Dr. Gordon F. Vars has studied integrative approaches to education since 1946 and has taught various forms of interdisciplinary programs to middle school, high school, college, and graduate school students since 1949. As a consultant and workshop leader he has assisted middle school and college faculties to develop interdisciplinary programs. Since 1961 he has been Executive Secretary-Treasurer of the National Association for Core Curriculum, a small professional organization that has promoted integrative curriculum and instruction since 1953. He has also served as a member of the AIS Assessment Committee.

Note

1. Robert J. Marzano (2001) proposed a "new taxonomy of educational objectives" (See Appendix B). Note that "synthesis" is listed under Level 2: Comprehension, where it is explained as "the process of distilling knowledge down to its key characteristics, organized in a parsimonious, generalized form—technically referred to as a macrostructure, as opposed to a microstructure" (p. 34). On the other hand, "generation of new products and new ideas" (p. 48) are key features of Bloom's Level 5: Synthesis and are incorporated in Marzano's Level 4: Knowledge Utilization.

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Appendix A

Primary Trait: Synthesis

Context: Interdisciplinary Paper/Project/Portfolio Rubric Developer: Don Stowe

Level 4

Paper presents a sophisticated synthesis of two or more disciplinary perspectives. The synthesis is characterized by creative/original/transformational/ dialectic thought. Rich metaphorical imagery may be present. The meaning derived from the synthesis of disciplinary perspectives is clearly more informative than the sum of the information of the disciplinary perspectives.

Level 3

Paper presents a general synthesis of two or more disciplinary perspectives. The synthesis represents an understanding of the disciplinary perspectives that is at least equal to the sum of the disciplinary perspectives. Rudimentary evidence of original/creative/transformative/ metaphorical/dialectic thought is present.

Level 2

Paper presents two or more disciplinary perspectives. Intention to synthesize is present. However the synthesis is a superficial summary of the perspectives. There is no evidence of original/creative/transformative/metaphorical/ dialectic thought.

Level 1

Paper presents two or more disciplinary perspectives. Attempt at synthesis is either absent or superficial.

Source: Association for Integrative Studies. (2000). "Second Annual Report of the AIS Assessment Committee." Oxford, OH: Author.

Appendix B

Marzano's "New Taxonomy of Educational Objectives"

Level 6: Self-Systems Thinking
Examining Importance
Examining Efficacy
Examining Emotional Response
Examining Overall Motivation

Level 5: Metacognition
Goal Specification Process
Monitoring
Monitoring Clarity and Accuracy

Level 4: Knowledge Utilization (Cognitive System)
Decision Making Problem
Solving Experimental
Inquiry Investigation

Level 3: Analysis (Cognitive System)
Matching
Classifying Error
Analysis Generalizing
Specifying

Level 2: Comprehension (Cognitive System)
Synthesis
Representation

Level 1: Retrieval Recall
Execution

Source: Robert J. Marzano. (2001). *Designing a New Taxonomy of Educational Objectives.* Experts in Assessment Series. Thousand Oaks, CA: Corwin Press.