Can Curriculum Integration Survive in an Era of High-Stakes Testing?

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Public schools are under siege today (Ohanian, 1999), and one of the most likely victims is developmentally-appropriate middle level education as advocated in *This We Believe* (National Middle School Association, 1982/1992, 1995) and detailed in *Turning Points 2000* (Jackson & Davis, 2000). Mandated high-stakes tests, introduced in the mistaken notion that you can improve schools by brow-beating school administrators, teachers, and students to raise test scores, has transformed many schools into dreary test-crammers.

Especially vulnerable is the concept of curriculum integration (Kohn, 2000, p. 31). National Middle School Association called for "integrative" curriculum in its 1995 position paper and the Association has supported this approach in its books, journals, and national conferences. *Turning Points 2000* reiterates the call for integrating subject matter across disciplines that was made in the original *Turning Points* (Carnegie Council on Adolescent Development, 1989). Yet even educators who have worked most closely with two of today's leading advocates and practitioners of curriculum integration James Beane and Barbara Brodhagen have reduced or abandoned their commitment to the integrative approach, due at least in part to emphasis on mandated standards enforced by high-stakes tests (Weilbacher, 2000).

Is there any hope for the future of developmentally appropriate curriculum? Is curriculum integration worth fighting for? What will it take to save, not only the middle school ideal, but one of its most distinctive features—curriculum integration? Here are some suggestions from one who has taught and advocated curriculum integration for more than 50 years.

What Is Curriculum Integration and Why Is It So Vulnerable?

Curriculum integration is a student-centered approach in which students are invited to join with their teachers to plan learning experiences that address both student concerns and major social issues. The name "core curriculum" was given to this approach by educators who developed it early in the twentieth century (Aikin, 1942; Vars, 1991), and in recent years Beane (1990/1993, 1997) has revived it under the term "curriculum integration." In arguing for integrative curriculum in its recent position paper, National Middle School Association (1995) called for learning experiences that are organized around real-life issues and problems significant both to young people and to adults.

In examining these issues, students draw on pertinent content and skills from many subject areas and acquire many of the "common learnings" or life skills essential for all citizens in a democracy (Vars, 1969, 2000b). Of course these include many, but not all, of the major concepts and skills set forth in the standards proposed by professional associations. However, in the integrative approach the emphasis is on higher-order thinking processes, cooperative learning,

and thoughtful consideration of human values, rather than the minutiae of separate subjects. The intent is to help students "make sense out of their life experiences" (NMSA, 1995) as they and their teachers jointly plan the study of complex issues.

Such a democratic, student-centered approach is clearly anathema to the "military-industrial-infotainment complex" (Ohanian, 1999) that appears to be driving current efforts to impose uniform standards on America's children. Whether this is part of a conspiracy to destroy the public schools may be open to debate, although others besides Ohanian seem to think so (Berliner & Biddle, 1995; Boutwell, 1997; Bracey, 1997).

The problem is not with the standards themselves, because society has a right to define what it expects children to know and be able to do. The problem comes from tying standards to high-stakes tests and expecting all students to reach the same adult-determined level of performance at the same time. This is a blatant violation of everything that is known about individual differences and about the impact of threat on human thinking, not to mention the serious shortcomings of most paper-and-pencil tests. Add the fact that most standards focus on low-level objectives in specific subject areas and the threat to curriculum integration is indeed serious.

Is Curriculum Integration Worth Saving?

Curriculum integration, in various forms and under a number of names, has been advocated for more than a century. Both Beane (1997) and Wraga (1996) have traced the idea back to 1895, but Stack (1960) traced its "philosophical and psychological antecedents … in educational theory" back even further. There is a fascinating story here for those interested in the history of ideas!

The arguments
The literature on curriculum integration is extensive. Since the early 1990s, the National Association for Core Curriculum (1991) has distributed a list of Selected References with 65 citations and also *Recent Books on Integrative/Interdisciplinary Curriculum* (published since 1990) with more than 75 titles (NACC, 2001). Succinct summaries may be found in Vars (1987/1993) and Beane (1997).

A number of curriculum theorists have argued that three "sources" or "foundations" should be considered when designing and justifying educational programs: psychological (the learner and learning theory), sociological (social realities and the structure of knowledge), and philosophical (purposes and values) (Vars, 2000b). Moreover, all three must be kept in reasonable balance. A middle school curriculum designed to do this was proposed nearly a quarter century ago by Lounsbury and Vars (1978). Briefly summarized below are some of the major arguments for curriculum integration and a list of a few of its proponents.

I. Psychological
A. Students are more highly motivated and learn better because integrative curriculum relates to their needs, problems, concerns, interests, and aspirations. (Faunce & Bossing, 1951/1958)

B. Students learn better because integrative curriculum is more compatible with the way the brain works, thus enhancing the development of higher-order thinking skills. (Caine & Caine, 1991; Hart, 1983)

II. Sociological
A. Students are better prepared for life in contemporary society because integrative curriculum addresses current social problems in all their real-life complexity. (Van Til, 1976)

B. Students learn major concepts and processes of the disciplines through studying carefully designed integrated units. (Erickson, 1998; Jacobs, 1989)

III. Philosophical
A. Integrative curriculum provides a coherent core of common learnings essential for all citizens in a democracy. (Beane, 1997; Vars, 1969)

B. Integrative curriculum provides a meaningful framework for examining values. (Apple & Beane, 1995; Zapf, 1959)

The evidence
It is one thing to list the presumed benefits of curriculum integration, but obtaining evidence to back up these claims is no mean feat, especially since many desired outcomes are difficult to measure. Nevertheless, more than 200 studies have been carried out to assess the effectiveness of the various forms of integrative curriculum and instruction (Vars, 1996, 1997; NACC, 2000a). Unfortunately, most of them used conventional paper-and-pencil tests to measure student achievement. There also are wide variations in the scope and quality of the research. Studies range from highly sophisticated analyses of data on thousands of students to longitudinal qualitative studies of students in one class or taught by one teacher or interdisciplinary team.

The difficulties in summarizing such a range of evidence are formidable. Nevertheless, it is reasonable to assert that:

Almost without exception, students in innovative interdisciplinary programs do as well as, and often better than, students in so-called conventional programs. In other words, educators who carefully implement any of the various types of interdisciplinary approaches can be reasonably assured that there will be no appreciable loss in student learning, except, perhaps, for the temporary "implementation dip" that occurs whenever people try anything new. (Vars, 1996)

This conclusion may be disappointing to advocates of curriculum integration, but it is essential that we not "oversell" it, especially in these times of single-minded focus on getting kids to do well on high-stakes tests. As Beane often reminds us, curriculum integration (or core, if you prefer the older term) is a complex concept involving both curriculum and instruction and guided by a democratic philosophy. It may result in higher test scores, but even more important are its other benefits such as love of learning, concern for other people, critical thinking, self-confidence, commitment to democratic group processes, and a whole host of other so-called "intangibles." Educators need to gather data on these objectives, too, if only through surveys of students, teachers, parents, and community members. It is patently absurd to judge all educational outcomes on the basis of tests, state-mandated or otherwise.

What Will It Take To Save Curriculum Integration?

Saving curriculum integration, and the whole idea of developmentally-appropriate education for any age student, involves both political action and wise educational policies.

The politics of curriculum integration have been cogently delineated by Beane (1997). The issue is part of a much larger question of what public schools are for and who will control them. Unfortunately, educators are not noted for being politically savvy and they failed to take a united stand against the high-stakes testing juggernaut when it was just getting under way in the 1980s, signaled by the infamous "Nation at Risk" document. Even today resistance is still spotty and disorganized. Needed are more courageous students, teachers, and parents who will simply refuse to participate in a process that is so grossly unfair and contrary to what we know about teaching and learning. Rare indeed are politicians like U. S. Senator Paul D. Wellstone (D-MN) who recognize and fight against the trend toward high-stakes testing. In Wellstone's words: "It is a harsh agenda that holds children responsible for our own failure to invest in their future and in their achievement" (emphasis added, Wellstone, 2000).

Everyone concerned about the welfare of children must use all the political processes at their disposal to stop the high-stakes testing craze before it does any more damage (Kohn, 1999, 2000). Until that happy day, educators must hold fast to the ideal of developmentally-appropriate middle level education even if they have to make some accommodations to the realities of their situation. Above all, they must not retreat to long-discredited drill-and-test practices in the mistaken notion that helping students cram in order to raise their test scores is the way to better quality education. Indeed, the opposite is true.

The choice is not between fully implementing all the recommendations of NMSA's *This We Believe* versus attempting none of them. Large-scale research carried out by Felner and others (1997) demonstrates that the most effective middle schools are those that implement a large proportion of the recommendations found in *Turning Points* (Carnegie Council on Adolescent Development, 1989) and in *This We Believe* (NMSA, 1995).

Here are some ways that educators can retain key elements of curriculum integration and still give reasonable and conscientious attention to mandated standards and proficiencies.

Designing Curriculum That Is Both Integrative and Standards-Based

Standards can be incorporated into the integrative curriculum process during the program design phase and also as teachers and students engage in teacher-student planning for specific units of study. But first it is necessary to face the irrefutable fact that it is impossible to ensure that all students will master all of the standards that have been proposed. Robert Marzano and associates at the Mid-continent Regional Educational Lab (McREL) have documented the utter futility of trying to teach all of the standards set forth by professional associations and other groups. They concluded:

A high school diploma would require as much classroom time as has historically resulted in a master's or professional degree. Even the brightest students would need nine additional years of schooling to master the nearly 4,000 benchmarks experts have set in 14 subject areas (Marzano, Kendall, and Gaddy, 1999).

Noddings (2000) asserted that subject matter specialists are bound to recommend too much because "they cannot control their passions." This is not the first time that schools have had to deal with the excess zeal of subject-matter specialists. Remember Jerome Bruner? His 1960 book *The Process of Education* set the tone for an earlier massive effort to organize the school curriculum around the "structure of the disciplines." Ten years later he admitted publicly that that approach was misguided. His words on that occasion are well worth remembering as we endure yet another wave of emphasis on disciplines-based standards:

If I had my choice now, in terms of a curriculum project for the seventies, it would be to find a means whereby we could bring society back to its sense of values and priorities in life. I believe I would be quite satisfied to declare, if not a moratorium, then something of a de-emphasis on matters that have to do with the structure of history, the structure of physics, the nature of mathematical consistency, and deal with it rather in the context of the problems that face us. We might better concern ourselves with how these [social] problems can be solved, not just by practical action, but by putting knowledge, wherever we find it and in whatever form we find it, to work in these massive tasks. We might put vocation and intention back into the process of education, much more firmly than we had it there before.

A decade later, we realize that *The Process of Education* was the beginning of a revolution, and one cannot yet know how far it will go. Reform of curriculum is not enough. Reform of the school is probably not enough. The issue is one of man's capacity for creating a culture, society, and technology that not only feed him but keep him caring and belonging (Bruner, 1971, p. 21, emphasis in the original).

Common learnings

Schools have always had too much to teach, so it is no surprise that it is necessary to be selective. Bruner's comments remind us that there are broad goals of education that are not bounded by academic disciplines or school subjects. These are the "common learnings" or "life skills" that are considered essential for effective functioning as a citizen and human being, regardless of vocation or station in life (Vars, 1969, 2000b).

A few states, such as Maine and Vermont, have identified these "generic" competencies and built them into their state standards. Vermont uses the term "vital results" for standards that "cut across all fields of knowledge." They are arranged in four categories: communication, reasoning and problem solving, personal development, and civic/social responsibility. Similar labels are used in Maine's Common Core of Learning: "Communication," "Reasoning and Problem Solving," "Personal and Global Stewardship," and "The Human Record." Although these common learnings or life skills are intended to be developed throughout the entire school program, they should be the primary focus of integrative curriculum.

Three educational "think-tanks" also have compiled lists of "generic" competencies that cut across discipline and subject lines.

1. Schoolwide Goals for Student Learning. One carefully-designed set of common learnings has been developed by the Alliance for Curriculum Reform (ACR) and the National Study of School Evaluation (NSSE) (Fitzpatrick, 1997). They examined the proposals of the various academic professional organizations and identified goals that are common across several specific subject

standards. Those common learnings, called "Schoolwide Goals for Student Learning," are divided into the following categories: Learning-to-Learn Skills, Expanding and Integrating Knowledge, Communication Skills, Thinking and Reasoning Skills, Interpersonal Skills, and Personal and Social Responsibility.

The rubrics suggested for evaluating student performance in each of these areas are stated in general terms. However, the examples of "Performance Indicators" are "Discipline-Based," as are the Program Evaluation Guides to be used for evaluating specific school programs or services. Thus the structure of the handbooks may handicap schools in their efforts to make sure "that their instructional and assessment efforts contribute to a coherent curriculum" (Fitzpatrick, 1997, p. xi).

2. Core Standards. An even more comprehensive approach has been used by the Center for Occupational Research and Development (CORD) in Waco, Texas (Edling & Loring, 1996). They identified common learnings embedded in standards proposed by academic organizations and also by groups advocating "workforce education"—businesses, industries, and vocational educators. Tapping the power of computer technology, they created a database of 38 sets of proposed standards. From these they pulled out 53 "Core" standards, similar to the schoolwide goals proposed by the National Study of School Evaluation. These describe a broad array of competencies, everything from "general housekeeping" to statistical analysis and computer literacy to ethics and self-concept.

What CORD calls Integrated Standards also have been generated for various occupational fields like business, engineering, the arts, and service. Field tests of this approach to both common learnings and integrated curriculum are going on in 12 states, and 14 curriculum packages are being developed to help school personnel implement the process (Edling & Loring, 1996).

3. Life Skills. Researchers at McREL, an educational research center in Aurora, Colorado, also began their search for "essential knowledge" by building a standards database incorporating 116 national standards documents in 14 content areas (Kendall & Marzano, 1996, 1997). In the process they identified a set of "life skills," which they described as "a category of knowledge that is useful across content areas as well as important for the world of work." These are divided into four areas: thinking and reasoning, working with others, self-regulation, and life work.

An examination of these three formulations reveals a number of similarities. Any set of standards-based common learnings, or, better yet, a composite of all of them, would provide much-needed focus in curriculum planning at all levels and would be especially important in designing integrative curriculum.

Selecting and prioritizing
After compiling a statement of desired common learnings, it is then necessary to select and prioritize the many standards in the various subjects. It may seem presumptuous for local educators to pick and choose among subject matter standards that have been recommended by experts in prestigious national organizations and sanctioned by state departments of education, but they have no choice. Besides, who is better qualified to design curriculum than those who are closest to the young people being served?

Jackson and Davis in *Turning Points 2000* propose stringent criteria that schools should use to analyze and adapt state and local district standards to provide a basis "for developing a coherent, engaging curriculum." They argue that standards should be "selected and modified or supplemented by consensus" of those who will use the standards, including teachers, administrators, students, parents, and even representatives of higher education, business, and the community (p. 37).

Curriculum specialists have long wrestled with how to solicit meaningful involvement of all these groups and how to coordinate their work. The task is complicated by the fact that the appropriate role in curriculum planning for each category of stakeholder varies widely. For example, it might be inappropriate to expect someone representing local business interests to take part in a team's detailed planning of an interdisciplinary unit. However, that same person's input might be very useful to a curriculum committee outlining the broad features of the district's long-range curriculum design.

Space does not permit examining this issue here, but the "transformative curriculum design and planning" proposed by Henderson and Hawthorne (2000) is notable for its consistent application of principles of democracy. Curriculum planning requires adequate time and support and is best carried out during released time or during the summer months. Viewing state and district standards as guidelines, not absolutes, district and school curriculum committees can design curriculum that addresses the most important standards but that also leaves ample room for input by teachers, parents, and students during teacher-student planning.

Responsibility for developing state- and district-mandated competencies falls heaviest on teachers of language arts, social studies, science, and mathematics, whether organized in interdisciplinary teams, block-time classes, or otherwise. It is the teachers of these "core subjects" who are most likely to have team planning time during the day, while their students are in other classes. This division between so-called "core" and "encore/exploratory" subjects has been a perennial problem in middle level education. Inviting all staff to help define how mandated common learnings will be taught helps to heal this breach, even though certain teachers or teams may bear major responsibility for teaching them.

Designing integrative curriculum
After prioritizing the standards to be addressed through integrative curriculum, the next task is to determine its overall design and how staff will be organized to teach it. The options available have been described elsewhere (Vars, 1987/1993).

Teachers accustomed to delivering a curriculum that has required textbooks and prescribed scope and sequence are understandably anxious when asked to do the kind of free-wheeling teacher-student planning recommended by some advocates. They can see that it will be a huge task to design their own curriculum "on-the-spot," incorporating both mandated standards and student concerns, and to do it all without textbooks or other prescribed teaching materials. Is it any wonder that this form of curriculum integration has never been widespread?

Moreover, few teachers have experienced curriculum integration themselves as students, and, with few exceptions, teacher preparation programs give it scant attention. "Lack of qualified teachers" often was cited in early surveys as a major obstacle to implementing "core

curriculum" (Vars, 1962), and the situation is not much better today. Organizing a school into interdisciplinary teams is expected to facilitate curriculum integration, but the sheer logistics of team operation often leave little time or energy for planning occasional interdisciplinary units, not to mention full-scale curriculum integration.

Figure 1. Van Til's "Center of Experience" Compared with Beane's "Themes"*

War, Peace, and International Relations
Interdependence, Conflict Resolution
Overpopulation, Pollution, and Energy
Interdependence, Wellness
Economic Options and Problems
Social Structures, Commercialism
Governmental Processes
Independence, Justice, Institutions
Consumer Problems
Commercialism
Intercultural Relations
social Structures
World Views
Interdependence, Social Structures
Recreation and Leisure
Wellness
The Arts and Aesthetics
Identities
Self-Understand and Personal Development
Transitions, Identities
Family, Peer Group, and School
Interdependence, Caring, Institutions
Health
Wellness
Vocations
Social Structures
Communication
Interdependence, Commercialism
Alternative Futures
Transitions
Van Till (1976, p. 197)
Beane (1993, p. 61)
*Beane's ten broad themes have been repeated to illustrate potential parallels.
Current emphasis on society-imposed standards makes it imperative that teachers and curriculum specialists establish an overall structure for the school's integrative curriculum that addresses both the mandated standards and also the issues, problems, and concerns that are likely to be most meaningful to students. Schools and districts need to reconsider two ideas developed during the core curriculum movement: "problem areas" and "resource units" (Van Til, Vars, & Lounsbury, 1961/1967; Vars, 1999, 2000a).

Problem Areas. "Problem areas" or "centers of experience" are broad centers of human experience around which both student concerns and society's problems tend to cluster. Figure 1 presents Van Til's 1976 formulation, derived from the "interaction of curriculum sources." Note the parallels with the "themes" that Beane identified at the intersections of "personal and social concerns" (Beane, 1990/1993). During the progressive education era, several curriculum scholars generated sets of problem areas that they considered suitable for secondary school core programs. Many of the units taught in junior high core programs appeared to be based on the problem area concept (Van Til, Vars, & Lounsbury, 1961/1967).

Problem areas may be either required or optional. In either case, they should be designed to incorporate both the most critical standards and also the concerns that teachers anticipate will be uppermost in the lives of students. Representative parents and community members also may provide valuable input. Required areas may be assigned to a particular grade level, thus giving the integrative curriculum both scope and sequence. Required or optional, problem areas provide a modest degree of structure to the integrative curriculum.

Resource Units. Within the broad limits of a problem area, teachers and their students are free to develop learning experiences they consider most meaningful. This process is much easier if staff members have prepared "resource units" for each problem area. These are flexible, open-ended curriculum guides that offer a large number of suggested learning activities and instructional materials that might be useful in exploring a particular problem area. They also contain a statement of purpose or rationale, list typical student questions and concerns relating to that area, identify pertinent standards or other mandates, and suggest ways to assess and evaluate student learning. Thus a resource unit serves as a reservoir of ideas to use when planning a specific learning unit with a particular group of students.

The interdisciplinary units currently available from a number of publishers and Internet sources are helpful, but most of them provide for very limited student input (NACC, 2000b). Resource units should be kept deliberately open-ended so teachers and teams can add additional ideas as they encounter them. Loose-leaf notebooks or folders were used in the early days, but modern computers offer even greater flexibility today.

Involving students
Although teachers are ultimately responsible for what is taught, students have a right to know what is expected of them. Armed with a resource unit, including a pared-down and prioritized set of mandated goals and standards, teachers or teams are now ready to introduce the problem area to their students. It is important to outline the possible ramifications of a problem area, including the standards that it incorporates. This way, students from the very beginning can join with their teachers to help ensure that mandated competencies are addressed. When students understand the standards that are to be met during any particular year, they can suggest many creative ways to address them. Integrative curriculum, the problem area approach, and teacher-student planning are all likely to be unfamiliar to students' families. It is essential to keep them informed of plans as they evolve and to solicit their support and suggestions.

Should a problem area be presented before, during, or after engaging students in identifying their personal and social concerns? There are pros and cons for each approach.

Before. It is probably best for teachers to delay introducing problem areas until they get to know their students. A reasonable level of trust must be established before students will share their concerns and aspirations with either peers or teachers. Presenting students with a list of required problem areas or mandates too early in the game may suggest that there is little room for negotiation or that teachers are not sincere in inviting student input. And both students and their families will need an introduction to the semi-structured nature of a problem area, as well as the process of teacher-student planning.

Sharing interests is a time-honored way for teachers and students to get acquainted, and this can lead naturally into identifying personal and social concerns. Some students are more outspoken than others, so it is important to solicit written input from everyone before opening up the matter for class discussion. Conducting occasional anonymous surveys and providing a feedback or suggestion box in the classroom can encourage even the most reticent students to express their thoughts and feelings. Once an appropriate level of trust has been established, small group discussions lay the groundwork for classroom or team identification of most-prevalent questions and concerns. Student questions and concerns should be posted in the classroom, along with the major standards to be addressed during that year. These lists should be revisited from time to time during the year, both to check on progress and to tap into changes that take place in the students, the teachers, and the world.

During. Teachers sometimes "back-map" a completed unit to show students and parents where and when they had dealt with content and skills typically taught in separate courses. This sort of "after-the-fact accountability" is especially essential today (See for example, Brodhagen, 1995; Ziegler, 2000a, 2000b, 2000c). Identifying and labeling the standards and competencies included in a unit not only provides evidence that standards are being addressed, but also may reveal competencies that merit further attention in succeeding units.

It is important for teachers not to panic when they find that certain standards have not been sufficiently addressed. Instead of abandoning the integrative approach and falling back on didactic "drill and test" techniques, they should share their concerns with the students and their families, inviting them to join in planning remediation. Teachers who merely "insert" lessons or units to address certain standards without discussing it with their students are bound to lose credibility.

After. Ziegler (2000a, 2000b, 2000c) has described the benefits of keeping a running record of how standards are being addressed through integrative units and learning experiences. Reflecting on these at the end of the year is excellent review and reinforcement for students and provides important evidence to share with parents, administrators, and the community at large.

Balancing student needs, problems, and concerns with societal expectations has always been a challenging task. Inviting students to help in the process gives them excellent opportunities to develop critical thinking. It also demonstrates that their ideas are valued and helps them to see that education is a matter of serious concern for our entire society. Perhaps if more adults had gained this kind of insight while still in school, there would be more societal support for the schools today!

Conclusion

Curriculum integration, in which students are directly involved in planning, conducting, and evaluating their own learning, is a powerful way for middle level schools to demonstrate that they are "developmentally-responsive." Mandated high-stakes testing is a major threat both to curriculum integration and to the middle level school's commitment to meet the needs of young adolescents.

Some reassurance can be drawn from six decades of research which shows that students in interdisciplinary programs usually perform satisfactorily on standardized tests. How students will do in the new state tests remains to be seen. But we have explained how it is possible to retain significant features of curriculum integration, teach the most important state and district standards, and do it all in a way that advances the ultimate purposes of education in a democracy. Whether these efforts will be enough to "save" curriculum integration depends on how committed we all are to the ideals of middle level education. Let us hope that we are up to the task!

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Author Note
This article is based in part on "Integrative Curriculum in a Standards-Based World" by Gordon F. Vars and James A. Beane. ERIC Digest: EDO-PS-00-6, June 2000. (Available at www.nmsa.org/services/integrative_curriculum.htm)

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