

Our Crude Handling of Educational Reforms: The Case of Curricular Integration¹

Roland Case
simon fraser university

Failings in British Columbia's efforts to promote curricular integration illustrate a wider tendency in education systems to attempt systemic reform by responding in simpleminded ways to complex challenges. I argue we must improve our collective ability to conceptualize and operationalize educational initiatives if reform efforts are to succeed.

Parce que notre système d'éducation favorise des réponses simplistes à des questions complexes, l'auteur soutient qu'il faut améliorer notre capacité collective de conceptualiser et de rendre opérationnelles les initiatives en matière de pédagogie si l'on veut assurer le succès de nos efforts de réforme.

OVERVIEW

We change constantly the focus of our efforts to improve the education system. Since the 1960s, educational reforms have targeted the formal curriculum (e.g., modifying official educational policy), curriculum resources (e.g., developing teacher-proof instructional materials), teacher commitment (e.g., building teachers' sense of ownership), teacher efficacy (e.g., providing teacher effectiveness training), school climate (e.g., nurturing principals as educational leaders), structural features of schools (e.g., altering school infrastructures and decision-making practices), and accountability (e.g., establishing national standards and assessment procedures).

Confronted with failure to achieve significant lasting improvement by attending to one aspect of the education system, typically, we shift attention to some other aspect. Our record of educational reform will not improve, however, simply by finding new, more strategic loci of change. The failure of a particular initiative should not automatically be blamed on a misdiagnosis of the appropriate remedy; rather, I argue, we need to enhance significantly our capacity to competently effect any systemic intervention. In popularizing reforms we typically corrupt the initiatives by oversimplifying the issues, overgeneralizing the reform's application, and translating intricate approaches into recipe-like processes. In short, we have a penchant for responding in relatively simpleminded ways to finely tuned, complex educational matters (Fullan & Miles, 1992, pp. 746–748). The analogue in medicine would be to perform surgery on the brain by jabbing indiscriminately with crude instruments. Lack of success

with this operation would not be corrected by shifting to another part of the body, say, by operating on a patient's stomach after failing to correct the problem by operating on the brain. Until we improve our "operational technique," we have little reason to expect success with initiatives that focus on any aspect of the system.

The underappreciated challenge facing educational reform is to improve our collective ability to conceptualize and operationalize change initiatives. In other words, we must learn to explicate the meaning and purpose of initiatives with adequate clarity and to translate them into sufficiently refined practical strategies so that they are commensurate with the intricately balanced matrix of countervailing factors operating within any education system.

This view of education reform as a complex enterprise has recently received much attention. In his presidential address to the American Educational Research Association, Cuban (1992) stresses the inevitability of enduring educational dilemmas—complex, untidy, entangled situations that require the balancing of competing claims. In particular, he highlights the need to negotiate the two educational solitudes—the gap between the worlds of the theoretician and the practitioner. Sarason (1990) claims in *The Predictable Failure of Educational Reform* that we undermine reform efforts by our penchants for conceptual vagueness (p. 46), exaggeration (p. 68), and oversimplification (p. 100). In her influential book *Contradictions of Control*, McNeil (1988) documents the "fragility of the conditions necessary for good teaching and curricula" and the resulting need to avoid "simplistic remedies" (p. xiv). Although her focus is the tension between educational goals and institutional control, there are many more tensions to be negotiated; for example, between breadth and depth of knowledge, rigour and spontaneity, mastery and discovery, excellence and equality, personal well-being and collective welfare, institutional requirements and individual autonomy, and centralized and decentralized control.

The challenge is doubly formidable because successful systemic reform requires considerable finesse across the educational community. It is not adequate that the masterminds of the intervention grasp the complexity of the issues; individual teachers must understand the intricacies of the plan sufficiently so that they can adapt it successfully to their own school and classroom situations. Success with some teachers, or in a few demonstration schools, is insufficient, since the education system as a whole would be largely unchanged. Notice that in medicine not even an appropriate remedy will safeguard the health of the community against a disease if relatively few doctors administer it competently. Similarly, an educational reform will not remedy an identified problem if it succeeds in only a relatively small sector of the community. Our efforts will continue to meet with limited success until we improve our *collective* ability to conceptualize and operationalize educational initiatives.

I will illustrate this need for greater finesse by considering the conceptual and operational shortcomings besetting efforts to promote curricular integration.

Although my focus is British Columbia, other writers report that problems similar to the kinds I document about curricular integration extend to other jurisdictions (Alleman & Brophy, 1993) and to other kinds of reform efforts—whole language (Edelsky, Altwerger, & Flores, 1991, pp. 1–5), authentic assessment (Case, 1992b; Roemer, 1991), school restructuring (Timar, 1989; Tyack, 1990), and progressive education (Alexander, Rose, & Woodhead, 1992; Patterson, 1986). A recent British government document, for example, attributed the disastrous legacy of the Plowden Report not to a lack of soundness of the Report's progressivist ideas, including curricular integration, but to fact that these ideas "have become the jargon of others who have jumped on the bandwagon but cannot play the instruments" (Clegg, cited in Alexander, Rose, & Woodhead, 1992, p. 10).

Before discussing the state of curricular integration in British Columbia, let me clarify a few points. I am not insinuating that practicing teachers are solely or even largely to blame for the discouraging record of educational reform. In fact, I focus on ways that policy makers and writers shape the educational agenda through their influence on curricular and institutional policies, instructional resources, professional journals and books, preservice teacher education, and inservice professional development. Further, I know that many individual teachers possess rich understandings of current reform initiatives. My point is that *many* is not enough: successful *systemic* reform depends on widespread success in schools and classrooms. Finally, my concerns about the ways in which curricular integration has been implemented should not be seen as criticisms of the value of promoting greater integration, properly understood.

CURRICULAR INTEGRATION IN BRITISH COLUMBIA

In 1989, the British Columbia Ministry of Education (hereafter BCME) initiated the Year 2000, an ambitious project to reform significantly public education. This initiative was the government's response to the Royal Commission on Education in British Columbia (Sullivan, 1988). The foundational principles and directions for these reforms are enunciated in four revised documents—an overall framework document (BCME, 1990b) and three program documents (BCME, 1990f, 1993a, 1993b). Also, the Ministry has developed, and is planning to develop, a number of resource and implementation documents (e.g., BCME, 1990g, 1992), and has sponsored several provincial conferences and several hundred school-based pilot or "development" projects. In addition, untold numbers of teaching units, resources manuals, articles, and workshops have arisen through individual, school, district, and university initiatives. Although there is much to recommend the basic vision of education implied in Year 2000 initiatives, considerable criticism has focused on three concerns: lack of clear articulation of the program proposals, negative implications for practice of

specific policies, and inadequate support for implementation (BCME, 1990a, p. 3; BCME, 1990e, pp. 5–6; Case, 1992a; Muhtadi & Shute, 1991). Of particular interest is the conception and operationalization of curricular integration—arguably one of the central, most contested initiatives of the Year 2000. The complexity of the notion of curricular integration has not been adequately appreciated (Case, 1991a, 1991b; Werner, 1991a, 1991b): conceptually, the term is defined ambiguously and vaguely, and there is general lack of specificity about its intended purposes; operationally, simplistic and often inappropriate means are regularly used in the name of integration.

Conceptualizing Curricular Integration

Although there is widespread support, in British Columbia and elsewhere, for the idea of reducing fragmentation within the curriculum, policy makers, educational writers, workshop presenters, teachers, and others have interpreted and responded to this challenge in diverse ways. This diversity is not a healthy response to varying demands, but rather is symptomatic of the use of curricular integration as a “buzzword” or slogan, to use Komisar and McClellan’s (1974) term. As Coombs (1991) notes:

Given the diversity of things currently called curricular integration, it is tempting to conclude that the notion serves no serious purpose in thinking and talking about what is desirable in curricula; that its only use is as a slogan to garner support for curricular changes thought to be desirable for any of a vast assortment of reasons. (p. 1)

The danger with educational slogans—and slogans are ubiquitous in education—is that they are seductive and urge action without providing much direction. We have long been warned of the power of the positive-sounding phrase—“integrating the curriculum”—to disguise diverse and sometimes incompatible meanings (Dressel, 1958, pp. 7–8; Jacobs, 1989, p. 6; Knudsen, 1937, pp. 15–16; Pring, 1973, pp. 59–64; Taba, 1962, p. 191).

Many Year 2000 program documents reflect (and fuel) this pattern of amorphous use by offering multiple conceptions of curricular integration promising to solve myriad problems, with the only defining feature being that each conception involves “connections” of one sort or another:²

Integration acknowledges and builds on the relationships which exist among all things. An integrated program is one in which the child experiences learning in a holistic way, without the restrictions imposed by subject-area boundaries. (BCME, 1990f, p. 127)

Organizing integrated learning experiences reflects an orientation that acknowledges the interconnection that exists between and among all things. (BCME, 1990c, p. 27)

Such vague perceptions of integration as “relationships” or “interconnections” producing “holistic” experiences are not limited to British Columbia (cf. Drake, 1991, 1992; Ontario Ministry of Education and Training, 1993, pp. 6–7, 13) and, regrettably, have detrimentally shaped the ways curricular integration has been operationalized.

One of the worst examples of pseudo-clarity in discourse about curricular integration is heavy reliance, with virtually no explanation, on the notion of “natural connections” or “natural fit” to describe when integration is properly conceived (cf. Brandt, 1991, p. 24; BCME, 1992, p. 10; Drake, 1991, pp. 21–23; Fogarty, 1991, p. 79). For instance, a BCME (1992) document intended to promote understanding of curricular integration provides no help in deciding what “natural fit” means, especially when we consider the examples featured in this document. One example describes the integration of language arts with a social studies unit on ancient Egypt by introducing *The Egyptian Cinderella*, a pleasing picture book that focuses on a rather straightforward relocation of the classic Cinderella story (p. 10). When we consider that most students will know the basic story, that very little is added to the characters and plot by changing the geographical details, and that drawings of Egyptian scenes which have greater educational payoff could easily be found elsewhere, it is difficult to comprehend, *if* this qualifies as a “natural fit,” what would *not* count as a “natural fit” between two subjects. Similarly, another example describes a teacher integrating music with social studies by composing with her students a song that is based on the names of the provinces and capital cities of Canada (p. 11). Although students may enjoy the song, and the song may be a helpful mnemonic, this connection between social studies and music seems contrived.

The integrative merits of any given connection depend upon the reasons for integrating. Yet, this BCME document, like many other professional publications (cf. BCME, 1993a, p. 11; Fogarty, 1991, p. 65), gives the impression that integration can and should mean whatever individual educators wish it to mean. The effect of this is to seriously undermine curricular integration efforts. As Hargreaves (1993, p. 124) suggests, the open-ended and ambiguous nature of numerous so-called “definitions” of integration inappropriately encourages many teachers to conclude that they are already integrating their curriculum. In addition, crude or counterproductive applications are likely when the goals, assumptions, and tensions underlying an innovation are not well understood.

Operationalizing Curricular Integration

The two most commonly employed approaches to integrating the curriculum in British Columbia (and elsewhere) are, at the elementary level, use of themes, and, at the secondary level, fusion of separate subjects into a single course.³ Although these approaches have some utility, they are often inappropriate,

because many legitimate reasons for curricular integration are not served by either approach, and counterproductive, because they involve tradeoffs among other educational values that would better be served by alternative approaches. I will consider each of these flaws.

Inappropriate Strategies

Thematic units and fused courses are often inappropriate strategies because they do not serve several important goals for curricular integration. A major reason for integrating the curriculum is to enhance student perception of the relevance of schooling (Daniels, 1991; Jacobs, 1989, pp. 4–6). Although it is possible that relevance will be promoted using thematic units or fused subjects, these approaches may not be particularly germane to the factors most strongly affecting student perceptions of curricular relevance (cf. Mansfield, 1989). The research literature on integration is often unclear whether the claims of enhanced student relevance are attributable to the inherent appeal of themes or to the many changes that accompany, but are not inherent to, a thematic approach (cf. Aschbacher, 1991; Greene, 1991; Mansfield, 1990). In fact, several teachers have reported to me that thematic units can decrease perceived relevance because students tire of studying the same theme day after day. Furthermore, varying teaching strategies and allowing students to select topics for study—two strategies that have nothing to do with reorganizing the curriculum—may equally, or better, promote perceived relevance.

Another objective of curricular integration that may not be well served by thematic units is suggested by the distinction between horizontal and vertical integration. The former term refers to integration of curricular content *at any given time* and the latter term to integration *over time* (Tyler, 1958, p. 107). Thematic units do not promote vertical integration. In fact, preoccupation with thematic units may undermine integration of curricular content from year to year and unit to unit (Knudsen, 1937, p. 22). For example, if everything studied in one unit is closely tied to one theme, say that of “bears,” and the following unit has “weather” as its theme, students may become confused about the connections among their studies. In other words, increased horizontal integration of content may be purchased at the cost of decreased vertical integration.

We can see how themes may even fail to promote horizontal integration of content by distinguishing between an *organizing* and a *unifying* principle (Coombs, 1991, p. 3). The former identifies a common thread or feature among a collection of elements; the latter identifies a characteristic that explains how each constituent contributes to a coherent or unified whole. Curriculum content is organized, but not integrated, if the elements do not build on each other to produce an interlocking, mutually supporting picture. For example, suppose we *organize* the curriculum alphabetically according to the first letter of the topics

to be taught. The first unit, dealing with the “A” objectives would include study of “abbreviations,” “algebra,” “apostrophes,” “archaeology,” “atlases,” and so on. This unit is not *integrated* because the principle for selecting topics—that all topics in a unit start with the same letter—provides no educational coherence. In this case, the connections within and among the units are contrived and trivial. Although this example is obviously silly, it helps us to see that the mere joining together of various elements under the rubric of a common theme does not necessarily integrate the studies educationally. The content of unit “A” is integrated only to the extent to which study of, say, atlases assists students in understanding archeology.

Now consider an actual example of a thematic unit suggested in one of the Year 2000 documents. Below is a sampling of suggested activities in each subject for a thematic unit on forests (BCME, 1990g, pp. 319–330):

Art: make paper;

Social Studies: write letters to the editor about environmental issues;

Language: listen to stories by and about Emily Carr;

Music: dance to music from the “Four Seasons” by Vivaldi;

Nutrition: write a guide for the library about edible plants in the forest;

Science: make a class terrarium;

Mathematics: use natural objects from the forest environment to develop concepts such as estimation and seriation.

Although all of these activities are associated in some way or another with forests, they are not integrated—increased understanding promoted by any of the suggested activities contributes little to an understanding of the other, supposedly related topics. For example, the only thing that Emily Carr, edible plants, and making paper have in common is a tangential connection to forests. Regrettably, this pattern is representative of many supposedly exemplary thematic units—for example, units organized around “flight” (Jacobs, 1989, pp. 57–59), “patterns” (Fogarty, 1991, p. 63), “consumerism” (Palmer, 1991, p. 59), and “My Travels with Gulliver” (Kleiman, 1991, pp. 48–50), and on the so-called thinking strategy of reflection (BCME, 1992, p. 12). Furthermore, this pattern is indirectly encouraged by those who suggest that teachers plan their own integrated units by freely brainstorming a sprawling web of disparate ideas (cf. Drake, 1992; Schwartz & Polishuke, 1990, pp. 49–55). Although there may be value in *organizing* units around themes, merely making connections, however contrived, between subjects does not integrate the subjects in any educationally significant way (Alleman & Brophy, 1993; Case 1991a, 1991b). This lack of clarity about the meaning of integration—a legacy of its usage as a slogan—undermines the very purposes for which it is proposed.

Ironically, organizing curriculum around loosely defined themes may increase the amount of curricular fragmentation. The disciplines, for all of their narrowness, provide integrative principles—disciplines are fields of inquiry that share

standards of evidence, fundamental explanatory concepts, and methodological procedures (Hirst, 1978, pp. 132ff.). The same integrity of study cannot be claimed for many thematic units that indiscriminately lump together disparate kinds of questions and fields of inquiry. Yet, some proponents of integration reveal a stereotypical and unproductive tendency to characterize disciplines as the antithesis of integration—as “territorial spaces carved out by academic scholars for their own purposes” (Beane, 1991, p. 9; see also Drake, 1991). In place of the disciplines, one professor of education advocates a transformative “new curriculum vision” that bases all instruction on students’ questions and concerns (Beane, 1991, p. 12). Teachers who plan on the basis of presumed needs of students are dismissed as (necessarily) imposing on students “the interests of a teacher” or the “manipulation of subject areas” (Beane, 1991, p. 12). Although the disciplines offer only one way, and not always the most appropriate way, of integrating subject matter, it is misleading to imply that non-disciplinary studies are inherently integrative.

A further example of what might be called “false integration” arises where such subjects as English and social studies are purportedly integrated into a new subject, humanities. On many occasions, virtually no integration of content occurs; often, “humanities” amounts to little more than having the same teacher deal with English for half of a double-blocked class and with social studies the other half. An additional concern with fused courses arises because some teachers are pressured into teaching these “interdisciplinary” courses despite a lack of background training and interest (Palmer, 1991, p. 57).

Counterproductive Strategies

Not only do many thematic units and fused subjects fail to promote the intended goals for curricular integration, their use encroaches on other educational goals. For example, the different forms of inquiry may not be addressed adequately if all content is structured around thematic units or fused subjects, even if they are thoughtfully integrated. As Coombs (1991) explains, “Attempting to teach any of them [disciplinary forms of inquiry] would require very significant and sustained digression from the problem or theme under consideration” (p. 13). Years ago, Taba made a complementary point about the need to balance a multiplicity of factors. After criticizing the oversimplification by those who would regard either child-centredness or subject-centredness as the *sole* foundation for the entire approach to curriculum, Taba (1962) observes:

A similar tendency is illustrated by the way that the principle of integration of knowledge is applied in discussions of the core curriculum. According to theoretical statements, the chief principle of the core curriculum is supposed to be integration of knowledge. Yet trouble brews if this simple principle overrides the consideration of the unique requirements of the various areas of knowledge and if integration is effected without sufficiently

considering what the appropriate threads of integration might be and what aspects of the content of various disciplines can appropriately be brought together. (p. 414)

The problem of naive and exaggerated claims is apparent in the professional literature on curricular integration (cf. Schwartz & Pollishuke, 1990, pp. 49–50). Alleman and Brophy (1993), two of a handful of researchers to write in the professional literature about their reservations about curricular integration, wisely reject the seemingly prevalent maxim that the more integration the better (p. 287).

Excesses with fusion of subjects were also noted during the Eight-Year Study (Aikin, 1942; Progressive Education Association, 1942), an impressive longitudinal experiment in school restructuring involving 30 high schools across the United States during the 1930s. Most teachers involved in the study concluded that fusing mathematics and science was unwarranted because the relatively meagre mathematics involved in most science courses could be taught in passing as needed (Aikin, 1942, p. 53). Reservations about fusing social studies and English included concerns that English often became “the handmaiden” of history, that the literature from certain historical periods was too scarce to justify devoting much time to it, and that collapsing subjects created considerable “artificial integration”—a predicament worse than the situation integration sought to eliminate (p. 53). These encounters with subject fusion caused most teachers to question the wisdom of their attempts to “put subjects together.” As Aikin (1942) explains: “The visitor would have found in 1933 enthusiasm for fusion of subjects, but had he come again in 1936 he would have found doubt, discouragement, and a search for something better” (p. 53).

Unfortunately, the valuable discussions coming out of the Progressive movement and out of England in the 1970s are rarely consulted in contemporary debate about curricular integration. This is particularly unfortunate in the case of the Eight-Year Study, which according to Tyler (1987) is one of the five most significant curriculum events in the twentieth century. Although we cannot be sure that conclusions would have been identical 60 years later, it is regrettable that British Columbia embarked on its initiatives without considering these extensive and thoughtful experiments in curricular integration. In general, current recommendations about curricular integration are offered without any apparent recognition of the full and stormy history of this notion. A particularly embarrassing example of token attention to the “long history” of integrated curriculum is found in a recent issue of *Educational Leadership*. In a two-page article, “Integrated Curriculum in Historical Perspective,” Vars (1991) shamefully ignores all complexity and glosses over the controversies characterizing the history of curricular integration.

In addition to tradeoffs involving competing educational values, fusion of subjects must be reconciled with teachers’ personal values and beliefs, and with more general norms operating within schools. As Werner (1991a) documents,

fusion of subjects often conflicts with teachers' sense of professional identity as subject specialists, and with their personal efficacy and autonomy. Similarly, traditional assessment practices have been shown to undermine high school teachers' efforts to integrate the curriculum (Martin-Kniep, 1994; Soodak & Martin-Kniep, 1994). Unless curricular integration fits more broadly with their established practices and values, many teachers will likely reject, avoid, or unsuccessfully implement the initiative.

No doubt there are numerous exemplary thematic units and fused courses. For the reasons outlined above, however, in many contexts more appropriate, more measured responses to the challenge of integrating curricular content are advisable.⁴ My purpose has not been to resolve the problems but to illustrate the range and subtlety of considerations that must be, but frequently are not, accommodated.

CONCLUSION

It is likely that current efforts to integrate the curriculum will improve *some* classrooms in British Columbia and elsewhere; it is less certain, however, that extensive reform will result. The effect of prevailing, rather crude understandings of curricular integration is that many efforts miss the mark. If this initiative is largely unsuccessful, it is not simply a case of one more missed opportunity to improve the education system — and better luck next time, as it were. The moral, educational, and financial stakes involved make such relative indifference to the outcome unacceptable. When we embark on educational reform we experiment with students' welfare, subject great numbers of teachers (and parents) to considerable additional work and anxiety, and spend increasingly scarce educational dollars. Furthermore, each failed attempt diminishes our system's capacity to effect change by destroying the trust and support of those who must shoulder the burden of future reform efforts. Although it is regrettable that promising reform initiatives are squandered, it is shameful to embark blithely on a different set of initiatives without taking significant steps to improve their prospects for success.

Toward the end of his book, Sarason (1990) asks: "Granted that restructuring (whatever that may mean) is necessary, and granted that it can have desirable consequences for parents and educators, on what basis, other than hope and prayer, will it bring about classrooms consistent with the overarching aim?" (p. 165). Considering the track record of educational reform, this is a fair question. My response is that success with curricular integration or, for that matter, with any educational reform, depends on enhancing our collective ability to conceptualize and operationalize those efforts with greater clarity, rigour, and finesse. We will not escape these requirements by continually looking for a new fix.

NOTES

- ¹ An earlier version of this article, titled "Constraining school reform: Troubling lessons from British Columbia," was presented at the Restructuring Education Conference, 5–7 March 1992, Ontario Institute for Studies in Education, Toronto, Ontario.
- ² See Werner (1991b) for a compelling account of the sloganeering evident in early Year 2000 discussions of curricular integration. At least three multi-featured senses of curricular integration are implied in the initial program document for grades 11 and 12 (BCME, 1990d, pp. 21–22). Although each of these interpretations has potential merit, the cumulative effect is to draw attention away from clearly articulating what it would mean to *integrate* disparate elements of the curriculum. Curiously, although the notion of curricular integration remains implicit throughout the revised document, the term is mentioned, but not explained or developed (BCME, 1993b, p. 11). Ignoring the term certainly does not promote the needed conceptual clarity. The conceptions offered in the revised program documents for kindergarten to grade 3 are no less amorphous. Without expressly differentiating them, the documents allude to five forms of curricular integration (Case, 1992a, pp. 384–386) and continue to recommend use of themes in somewhat disturbing ways. The most recent program document for grades 4 to 10 (BCME, 1993a, p. 11) offers no definition of integration and announces that it is the teacher's responsibility to determine how the curriculum is to be integrated. A recent discussion document on curricular integration (BCME, 1992) does little to alleviate the confusion. For example, the stated rationales for integration (p. 7) are found in quotations, taken out of context from four sources, and these statements bear no obvious connection to the stated purposes of integrating the curriculum (p. 9). Also, the illustrative examples of integration offered in this document are, at best, confusing.
- ³ In British Columbia, fusion of subjects is encouraged by the organization of subjects into four strands (humanities, science, fine arts, and practical arts), as described in the framework document (BCME, 1990b, pp. 15–16). Elsewhere, Timar (1989, p. 270) reports that fusion of subjects is the most common approach employed in a Kentucky school restructuring initiative he reviewed.
- ⁴ Insertion and correlation are two modes which have received insufficient attention. Insertion (sometimes called incorporation) refers to a mode of integrating that involves adding selected aspects of one subject to another subject area. Interpreting the art of an historical period or reading an historical novel in social studies are instances of insertion. Generally, the integrity and basic structure of the subject into which the insertion occurs remains largely unchanged, thus facilitating the teaching of both the unique features of the discipline and the points of intersection with other disciplines. Correlation implies drawing connections and noting parallels among elements taught in separate courses. For example, correlation might involve referring to concepts or skills acquired in mathematics when teaching science, or organizing the timing of topics so that the history and literature of a particular period are taught concurrently in different courses. Although there are limits to these alternative modes of integrating, they mitigate some of the problems accompanying thematic units and fused subjects.

REFERENCES

- Aikin, W. M. (1942). *The story of the Eight-Year Study*. New York: Harper.
- Alexander, R., Rose, J., & Woodhead, C. (1992). *Curriculum organization and classroom practice in primary schools: A discussion paper*. London: [U.K.] Department of Education and Science.
- Alleman, J., & Brophy, J. (1993). Is curriculum integration a boon or a threat to social studies? *Social Education*, 57, 287–291.
- Aschbacher, P. R. (1991). Humanitas: A thematic curriculum. *Educational Leadership*, 49(2), 16–19.
- Beane, J. (1991). The middle school: The natural home of integrated curriculum. *Educational Leadership*, 49(2), 9–13.

- Brandt, R. (1991). On interdisciplinary curriculum: A conversation with Heidi Hayes Jacobs. *Educational Leadership*, 49(2), 24–26.
- British Columbia Ministry of Education. (1990a). *Year 2000: Response summary*. Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1990b). *Year 2000: A framework for learning*. Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1990c). *The Intermediate Program: Learning in British Columbia*. Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1990d). *The Graduation Program* (response draft). Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1990e). *Field response to the Primary Program: Summary and analysis of anecdotal comments*. Victoria, BC: British Columbia Ministry of Education, Program Evaluation and Research Branch.
- British Columbia Ministry of Education. (1990f). *Primary Program foundation document*. Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1990g). *Primary Program resource document*. Victoria, BC: British Columbia Ministry of Education, Program Development.
- British Columbia Ministry of Education. (1992). *Curricular integration: An outline for discussion*. Victoria, BC: British Columbia Ministry of Education, Curriculum Development Branch.
- British Columbia Ministry of Education. (1993a). *The Intermediate Program policy: Grades 4 to 10*. Victoria, BC: British Columbia Ministry of Education.
- British Columbia Ministry of Education. (1993b). *The Graduation Program policy: Grades 11 and 12*. Victoria, BC: British Columbia Ministry of Education.
- Case, R. (1991a). Integrating around themes: An overemphasized tool? *The Bookmark*, 32(2), 19–27.
- Case, R. (1991b). The anatomy of curricular integration. *Canadian Journal of Education*, 16, 215–224.
- Case, R. (1992a). Educational reform in British Columbia: Bold vision/flawed design. *Journal of Curriculum Studies*, 24, 381–387.
- Case, R. (1992b). On the need to assess authentically. *Holistic Education Review*, 5(4), 14–23.
- Coombs, J. (1991). *Thinking seriously about curriculum integration* (Forum on Curricular Integration Occasional Paper no. 4). Burnaby, BC: Simon Fraser University, Tri-University Integration Project.
- Cuban, L. (1992). Managing dilemmas while building professional communities. *Educational Researcher*, 21(1), 4–11.
- Daniels, L. (1991). *Integration and relevance* (Forum on Curricular Integration Occasional Paper no. 3). Burnaby, BC: Simon Fraser University, Tri-University Integration Project.
- Drake, S. M. (1991). How our team dissolved the boundaries. *Educational Leadership*, 49(2), 20–22.
- Drake, S. M. (1992). Integrating curricula through transdisciplinary webbing. *Canadian School Executive*, 12(5), 3–6.
- Dressel, P. L. (1958). The meaning and significance of integration. In N. B. Henry (Ed.), *The integration of educational experiences: The fifty-seventh yearbook of the National Society for the Study of Education* (pp. 3–25). Chicago: University of Chicago Press.
- Edelsky, C., Altwerger, B., & Flores, B. (1991). *Whole language: What's the difference?* Portsmouth, NH: Heinemann.

- Fogarty, R. (1991). Ten ways to integrate curriculum. *Educational Leadership*, 49(2), 61–65.
- Fullan, M. G., & Miles, M. B. (1992). Getting reform right: What works and what doesn't. *Phi Delta Kappan*, 73, 745–752.
- Greene, L. C. (1991). Science-centered curriculum in elementary school. *Educational Leadership*, 49(2), 42–46.
- Hargreaves, A. (1993). Curriculum integration. In K. Leithwood, A. Hargreaves, & D. Gérin-Lajoie (Eds.), *Exemplary practices in the transition years: A review of research and theory* (pp. 123–138). Toronto: Ontario Ministry of Education and Training.
- Hirst, P. H. (1978). *Knowledge and the curriculum: A collection of philosophical papers*. London: Routledge & Kegan Paul.
- Jacobs, H. H. (Ed.). (1989). *Interdisciplinary curriculum: Design and implementation*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kleiman, G. M. (1991). Mathematics across the curriculum. *Educational Leadership*, 49(2), 48–51.
- Komisar, P., & McClellan, J. (1974). The logic of slogans. In B. O. Smith & R. H. Ennis (Eds.), *Language and concepts in education* (pp. 195–215). Chicago: Rand McNally.
- Knudsen, C. W. (1937). What do educators mean by "Integration"? *Harvard Educational Review*, 7, 15–26.
- Mansfield, B. (1989). Students' perceptions of an integrated unit: A case study. *The Social Studies*, 80, 135–140.
- Mansfield, B. (1990, June 5). *How teachers' personal definitions of integrated curriculum define their roles and practices*. Paper presented at the Canadian Society for the Study of Education, Victoria, British Columbia.
- Martin-Kniep, G. O. (1994, February). *Why we must ask teachers about reform efforts directed at curriculum, instruction, and assessment*. Unpublished manuscript.
- McNeil, L. M. (1988). *Contradictions of control: School knowledge and school structure*. New York: Routledge.
- Ontario Ministry of Education and Training. (1993). *The common curriculum: Grades 1–9* (working document). Toronto: Ontario Ministry of Education and Training.
- Palmer, J. N. (1991). Planning wheels turn curriculum around. *Educational Leadership*, 49(2), 57–60.
- Patterson, R. S. (1986). The Canadian response to progressive education. In N. Kach, K. Mazurek, R. S. Patterson, & I. DeFaveri (Eds.), *Essays on Canadian Education* (p. 61–79). Calgary, AB: Detselig.
- Pring, R. (1973). Curriculum integration: The need for clarification. *New Era*, 54(3), 59–64.
- Progressive Education Association. (1942). *Thirty schools tell their story*. New York: Harper.
- Roemer, M. G. (1991). What we talk about when we talk about school reform. *Harvard Educational Review*, 61, 434–448.
- Sarason, S. B. (1990). *The predictable failure of educational reform*. San Francisco: Jossey-Bass.
- Schwartz, S., & Pollishuke, M. (1990). *Creating the child-centred classroom*. Toronto: Irwin.
- Soodak, L. C., & Martin-Kniep, G. O. (1994). Authentic assessment and curriculum integration: Natural partners in need of thoughtful policy. *Educational Policy*, 8, 183–201.
- Sullivan, B. M. (1988). *A legacy for learners: Summary of findings*. Victoria, BC: Queen's Printer.
- Taba, H. (1962). *Curriculum development: Theory and practice*. San Francisco: Harcourt, Brace.

- Timar, T. (1989). The politics of school restructuring. *Phi Delta Kappan*, 70, 265–275.
- Tyack, D. (1990). “Restructuring” in historical perspective: Tinkering toward Utopia. *Teachers College Record*, 92, 170–191.
- Tyler, R. W. (1958). Curriculum organization. In N. B. Henry (Ed.), *The integration of educational experiences: The fifty-seventh yearbook of the National Society for the Study of Education* (pp. 105–125). Chicago: University of Chicago Press.
- Tyler, R. W. (1987). The five most significant curriculum events in the twentieth century. *Educational Leadership*, 44(4), 36–38.
- Vars, G. F. (1991). Integrated curriculum in historical perspective. *Educational Leadership*, 49(2), 14–15.
- Werner, W. (1991a). *Curriculum integration and school cultures* (Forum on Curricular Integration Occasional Paper no. 6). Burnaby, BC: Simon Fraser University, Tri-University Integration Project.
- Werner, W. (1991b). Defining curriculum policy through slogans. *Journal of Educational Policy*, 6, 225–238.

Roland Case is in the Faculty of Education, Simon Fraser University, Burnaby, British Columbia, V5A 1S6.