MAKING SENSE OF DIVERSITY: THE CURRENT STATE OF CURRICULUM RESEARCH

GEORGE J. POSNER, Cornell University

All through this field, as in other places where exciting work is going on, views which may well be compatible nevertheless struggle with one another. This is because they struggle for attention, the research programs may be compatible in content, but the thought that goes with each of them, "this is the way to go on," excludes the others.

—BERNARD WILLIAMS

Some would describe the literature on curriculum research as marked by confusion. Other perhaps more generous observers prefer diversified or competitive to confused. However, few dispute the claim that curriculum research has meant different things to different researchers and theorists. This diversity stems primarily from diverse concepts of what curriculum research is and what (if anything) makes it distinct from educational research in general.

This article examines the range of ongoing or proposed approaches to curriculum research. I contrast different (often competing) approaches by identifying and then comparing the telling or key questions that guide the research. The key question points to the phenomena of interest and thus captures the essence of the research. Once we have analyzed a wide range of research approaches in terms of their key questions, we can use this perspective to view the field of curriculum research as a whole. Thus, this article concludes with a discussion of two implications of the review. First, the review is the basis for analyzing current concepts of curriculum and research as they are manifested in examples of curriculum research. Second, by capsulizing each of the varied curriculum-research approaches, the article attempts to illuminate how to integrate diverse approaches into research.
programs with increased comprehensiveness. That is, I show how to capitalize on diversity by searching for complementarity among approaches.

Rather than provide a review of individual curriculum-research studies, this article examines approaches to curriculum research. A curriculum-research approach here is a coherent program of research guided by one (or possibly two) key questions that direct all research studies in that approach. These key questions are so fundamental to the research program that typically the researcher never states them explicitly. Careful examination of the research literature usually uncovers these questions, however, thus revealing the basis for the approaches.

Table 1 lists a set of key questions implicit in currently proposed or ongoing approaches to curriculum research. A casual examination of Table 1 suggests the current range of approaches to curriculum research. Some researchers focus on the outcomes of education (e.g., questions 1, 2, 3, and 4), whether short-term or long-term, whether unitary or multiple. Some researchers analyze concepts and aims of education. Some study the materials or subject matter of education (e.g., questions 7, 8, 12, and 13). Other researchers study the students themselves (e.g., questions 14, 15, and 16). Others are concerned with the processes of carrying out educational planning (e.g., questions 9 and 17). Still others study schooling or whole schools and classrooms (e.g., questions 19, 20, and 21).

Table 1 introduces the current state of curriculum research. For the purpose of explicating each approach, however, I present additional features of each. Besides a key question, each of the many approaches to curriculum research also (1) has a purpose that stems from the researcher’s motive for asking the research question in the first place, (2) focuses specifically on particular educational phenomena as the object of study (e.g., achievement data and educational programs), (3) relies on particular research methods (e.g., self-report), and (4) results in particular types of products and claims (e.g., clear concepts, a determination of curriculum validity, a rationale for a subject matter, an analysis of experience). A key question, together with these four additional characteristics of a research approach, here capsulize each approach.

Besides explicating the characteristics of each curriculum-research approach, this review also identifies variants of each approach, possible lim-

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5 The approaches are not intended to be mutually exclusive, there is a great deal of overlap. Some approaches could be subdivided or combined.

6 D. Bob Gowin introduced me to these characteristics of research, particularly the notion of a "telling question." See D. Bob Gowin, "The Structure of Knowledge," Educational Theory 20 (Fall 1970): 319–328.
Table 1. Curriculum-Research Questions

Studies of Educational Outcomes
1. What are the outcomes of the educational system?
2. Which curriculum results in higher achievement?
3. What are the effects of implementing curriculum X compared with those of implementing curriculum Y?
4. What are the enduring effects of education in general or of curriculum X in particular? To what extent and in what ways are the learnings that result from curriculum X useful to the individual in out-of-school contexts?
5. What are the relative costs compared to the relative effectiveness of curriculum X?
6. What are the differential effects of different instructional treatments on different types of learners?

Studies of the Curriculum-Development Process
7. What knowledge claims, key concepts, telling questions, value claims, and methods of work are embodied by subject matter X?
8. What competencies does a student need to master to perform job X successfully?

Analyses of Educational Concepts and Aims
9. How do people make decisions and conduct deliberations?
10. What does educational concept X mean?
11. Why study subject matter X?

Studies of Educational Materials
12. What do the instructional materials themselves imply about the author or the appropriate audience?

Studies of Students
13. How appropriate are the textbooks used by schools?
14. What knowledge and concepts do the students bring to the classroom?
15. What are the conditions for conceptual change, and how can it be facilitated and guided?
16. How does each individual experience the curriculum?

Studies of Schools and Classrooms
17. How do the practical aspects of teaching in classrooms shape the operational curriculum?
18. What ideologies do schools really teach, and how are they taught?
19. How do the various factors within a school determine that school's character and the quality of the educational experience?
20. What was schooling like in the past, and what caused it to be that way?
21. What content is being explicitly taught, and how much emphasis is each item being given?

In some instances, and references that represent proposals, reviews, or actual research studies embodying each approach. The individual research approaches are grouped according to six general foci that characterize the literature: (1) studies of educational outcomes, (2) studies of the curriculum development process, (3) analyses of educational concepts and aims, (4) analyses of educational materials, (5) studies of student characteristics, and (6) studies of schools and classrooms.

STUDIES OF EDUCATIONAL OUTCOMES

These approaches focus on the outcomes of the educational process, both short- and long-term. Some approaches are concerned with only the

*By *Initiation*, I do not mean to imply that any research approach should be expected to do everything. Instead, the term is meant to connote the boundaries of each approach.*
outcomes; others relate outcomes to inputs and processes of education. Most
approaches use statistical comparisons to analyze outcome.

1. Survey-of-achievement approach. This approach is the most common
to the study of educational outcomes. No attempt is made to analyze inputs
to or aspects of educational processes. The only question here is, What are
the outcomes of the educational system? The focus is student achievement
measured by statistically comparing test scores with those of students in other
educational systems or from previous years. The product of the research is a
determination of the relative success of an educational system in achieving a
set of educational outcomes at a particular time. Limitations of these studies
include their inability to infer reasons for any differences found and their
reliance on a unitary concept of educational achievement. Two of the most
notable examples of this approach are the International Studies of Achieve-
ment and the National Assessment of Educational Progress.8

2. Curriculum-horse-race approach. This approach stems from decision
makers' need to choose between competing curriculums. It addresses the
question, Which curriculum results in higher achievement? The focus is uni-
tary measures of subject-matter achievement assessed through post-treatment
achievement comparisons of intact groups. The product of this research is a
determination of the "best" curriculum. Variants include studies measuring
relative gains from pre-treatment scores to post-treatment scores and studies
in which groups are randomly assigned. This approach is limited because
curriculums differ in the content included and emphasized.9 Therefore, find-
ings are usually attributable to differences in test-content bias for a particular
curriculum. Also, intervening variables remain unaccounted for (e.g., the
teacher), and a single measure provides only a limited concept of "best."

3. Profile-of-effects approach. This approach also stems from a need to
provide decision makers with an empirical basis for choosing between com-
peting curriculums. In contrast to the curriculum-horse-race approach, the
question here is, What are the effects of carrying out curriculum X compared
with those of carrying out curriculum Y? The major difference between the

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8See, for example, James S Coleman, "Methods and Results in the IEA Studies of Effects on
School on Learning," Review of Educational Research 45 (Summer 1975) 382; International
Association for the Evaluation of Educational Achievement, Science Achievement in Seventeen
Assessment of Educational Progress, Writing Achievement, 1969–1979. Results From the Third
National Writing Assessment, Volume 1: 17-Year-Olds (Denver: National Assessment of Educa-
tional Progress, 1980). (ERIC Document Reproduction Service No. ED 196 042.)

9Decker F. Walker and John Schaffarzick, Comparing Curricula, Review of Educational
two approaches centers on the choice of criterion for comparing curriculums. This approach focuses on a battery of outcome measures rather than a unitary achievement measure, although both approaches compare post-treatment effects. The product of this research is a determination of the differential effects of different curriculums. The possible variants of the profile-of-effects approach are similar to those of the curriculum-horse-race approach, although, in addition, noncomparative studies are sometimes employed. The major limitation of the profile-of-effects approach stems from its failure to address the question of which outcomes are the most valid. Walker and Schaffarzick advocate this approach and review studies that represent it; they give an excellent review of the research. Welch and Walberg and the Eight-Year Study represent outstanding examples.

4. **Enduring-effects-of-education approach** This approach stems from a desire to provide curriculums that will be useful to the student outside of the school’s walls and beyond the school years. The questions are, What are the enduring effects of education in general or of curriculum X in particular, to what extent and in what ways are the learnings that result from curriculum X useful to the individual in out-of-school contexts? The approach has no particular methodological commitment, although measuring out-of-school behaviors and relating them to previous school learnings is the general method of work. The product of this work is a determination of the validity of particular objectives, concepts of subject-matter areas, and forms of schooling as a means to achieving more ultimate educational goals. Major variants have to do with the kinds of input and output variables employed. Limitations stem from the difficulty in determining nontrivial out-of-school and particularly long-term behaviors. Broudy and Harnqvist present extensive discussions of and proposals for this approach. Hyman, Wright, and Reed address the question of enduring effects of education directly, though they are concerned more with quantity of schooling than with kinds of curriculum as the independent variable. The works of Dahllof and Husen and Boalt in mathematics, Bromsjo in civics, and Johansson in physics and chemistry relate instructional content to

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10Ibid.  
later vocational life, further study, and leisure time 10 years after schooling; they all present exemplars of the approach.14

5. Cost-effectiveness approach. This approach is somewhat similar in purpose to approaches 2, 3, and 4, it stems from a need to inform administrative decisions on resource allocation. The key question is, What are the relative costs compared to the relative effectiveness of curriculum X? The phenomena of interest (and the central concepts of this approach) are, of course, costs and effectiveness. The product of the research—a determination of costs, benefits, or both—results from an economic approach to cost-effectiveness analysis to which the approach is highly committed methodologically. The difficulty interpreting a comprehensive assessment of costs and effectiveness in educational programs limits this approach and leads to a reliance on only financial costs and benefits. As Fisher notes, "The really interesting problems are just too difficult and there are too many intangibles (e.g., political, psychological, and sociological) that cannot be taken into account in the analytical process, especially in a quantitative sense." Knezevich argues that the cost-effectiveness analysis is at the heart of a whole planning, programming, budgeting system (PPBS):

Such analyses are concerned with generating an index that reveals in a meaningful and systematic way the advantages (effectiveness) as compared with disadvantages (costs) of an alternative to one or more desired outcomes. It begins with clarifying purposes and continues by organizing cost data related to outcomes Analysis is the culminating step that applies such data in the appraisal of options.16

Fisher, Klees, Pachico, and Tobin provide an example of a study employing a cost analysis.17

6. Aptitude-treatment-interaction approach. Although the previously mentioned approaches are concerned with determining curriculum effects, most assume that effects can be determined independently of learners’ characteristics. The aptitude-treatment-interaction approach, on the other hand, stems from a concern for establishing an empirical basis for tailoring instruc-


16Stephen J. Knezevich, Program Budgeting (PPBS) (Berkeley, CA. McCutchan, 1973), p 185

tion to the individual. The key question is, What are the differential effects of different instructional treatments on different types of learners? The focus is learner characteristics (aptitudes or traits) as they interact with instructional treatments. The approach is methodologically committed to studying these effects using the statistical concept of interaction. The product of the approach is a determination of how instruction can be tailored to fit best with individual learner characteristics. A limitation arises because the research, so far, seems to reveal only marginal gains. Another limitation stems from the approach's assumption that instruction should be tailored to students' strengths rather than to build up weaknesses. Kallos has explicated many other limitations of this model as it applies to the practice of teaching and to the development of a theory of teaching. Rothkopf, Spielberger, Novick, and Resnick have all also attacked the model on theoretical and methodological grounds. In fact, Cronbach, the model's originator, has been one of its sharpest critics. Excellent reviews of research can be found in Cronbach and Snow, Bracht, and Salomon.

STUDIES OF THE CURRICULUM-DEVELOPMENT PROCESS

Two types of research approaches focus on curriculum development studies that are conceived as part of the curriculum-development process itself and studies that seek to understand the process.

7. Structure of knowledge approach Unlike the approaches that attempt to validate or test curriculums, this approach "unpacks" knowledge as it comes...
from knowledge producers to discover potential curricular content. The papers written during the 1960s curriculum-reform movement are examples of the approach because they attempt to answer its key question, What knowledge claims, key concepts, telling questions, value claims, and methods of work are embodied by subject matter X? As Gowin describes, the phenomena of interest are primary sources of knowledge in a discipline, such as research reports and critiques. Researchers analyze these documents by identifying each of the five aspects of the subject matter listed in the key question. The product of this inquiry is potential curricular content in a discipline. Besides discovering potential content, the approach may also include (as a variant) pilot-testing the content to determine its teachability. The major limitation of this approach results when the researchers fail to investigate the effects of learning the content, or the phenomenological response of the learner to the teaching-learning situation. Gowin and Novak and Gowin present proposals for the approach. Millman and Gowin represent an example of the approach in educational research.

8. Task-analysis approach. Whereas the previous approach focuses on analyzing disciplines to generate curricular content, this approach focuses on analyzing tasks to develop curriculums. The key question is, What knowledge and skills does a student need to master to perform task X successfully? The approach uses observational, survey, and interview methods (primarily in occupational education); the product is a set of performance objectives for occupational education in a particular area. Limitations are similar to those of the structure-of-knowledge approach. The task-analysis approach can be traced to Bobbitt's activity-analysis techniques and to Charters's job-analysis techniques. Berkey, Drake, and Legacy apply the approach to occupational education. Gagne and Gagne and Briggs apply it to curriculum development in all major school subjects.

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9. Planning approach. The curriculum-planning process can also be the subject of investigation. The purpose of the investigation may be to understand the process and to make it more effective. The question here is, How do people make decisions and conduct deliberations about the curriculum? With a focus on the curriculum-planning process itself rather than on its products, this approach describes how decisions are actually made and how adequately curriculum theory accounts for the process. The approach has no methodological commitment; however, the usual procedure is to conduct a sort of content analysis of deliberation transcripts, to administer questionnaires to participants, and, in some cases, to ask the planners to think aloud while planning. One possible limitation of the approach is that it fails to ascribe characteristics of planning products to characteristics of the planning process. It tells us not how to improve the process but only how it occurred. Schwab's essays on the "practical," as a "language for curriculum," serve as one conceptual framework for this approach. Eisner, Schaffarzick and Hampson, Shipman, and Walker provide examples of the approach focused on curriculum projects. Clark and Peterson, Clark and Yinger, and Smith and Sendlebeck apply the approach to teacher planning.

ANALYSES OF EDUCATIONAL CONCEPTS AND AIDS

Rather than empirically determining the effectiveness of the curriculum, philosophical studies analyze the concepts and aims that form the foundation for education.

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10 Conceptual-analysis approach. In contrast to the structure-of-knowledge approach, which analyzes primary sources of knowledge as a means for generating curricular content, this approach uses analysis techniques to increase the clarity of the central concepts that educationalists use in doing research and formulating policy decisions (e.g., psychological versus logical organization, needs, teaching, performance, and competencies). The question is, What does educational concept X mean? The focus, then, is educational concepts and the method of work drawn from the work of analytic philosophers, termed conceptual analysis.\(^5\) The product is a set of clear, useful concepts for guiding curricular thought, with particular attention to the curricular implications of the analyses. The major limitation stems from the notion that conceptual clarity takes us only so far. Clear thinking may be necessary but is certainly not sufficient for making wise policy decisions or for generating fruitful research questions. Also, because much of this work entails constructing conceptual frameworks, the approach is limited to the extent that the world resists pigeonholing. Komisar's analysis of the concept of need, and his arguments on the implications of this analysis for curriculum development based on needs, is an excellent example of this approach.\(^3\) Smith and Ennis provide numerous other examples.\(^4\)

11. Curriculum-justification approach. In contrast to approaches 2, 3, and 4, which attempt to validate curricular content in terms of empirical determination of utility, this approach argues the case on a priori grounds for including a content area in the curriculum. The question posed is, Why study subject matter X? The phenomenon of interest is the subject matter itself. Although philosophers usually carry out the research, it has no particular methodological commitment. The product is a rationale for a particular subject matter. The major limitation stems from the approach's failure to examine empirically the actual consequence of teaching a particular subject matter, thinking about potential outcomes or meanings may suggest things to measure, but the existence of potential benefits does not ensure that those benefits will, in fact, be achieved. Broudy's justification of art education is an example of this approach.\(^3\) Phenix's ambitious analysis of the meanings inherent in disciplines represents a more comprehensive attempt at curriculum justification.\(^3\)


STUDIES OF EDUCATIONAL MATERIALS

In contrast to the first two sets of studies that focus on educational products and development processes, this next set focuses on one important input to education: the materials used by students.

12. **Content-analysis approach.** This approach seeks to uncover implicit constraints in educational materials to assess their utility with particular audiences. It differs from approaches 6 and 7 in its focus on analyzing the materials themselves rather than their empirically determined effects or the discipline of knowledge from which the materials derive their content validity. The question of concern is, What do the instructional materials themselves imply about the author (e.g., his biases) or the appropriate audience (e.g., reading level)? This approach does not seem to have any methodological commitment, although the usual procedure is to count instances of significant words or phrases, to place them in predetermined categories (e.g., by grade level if reading difficulty is being assessed, in categories indicating connotative meanings if biases are being assessed), and then to compute some index using a formula. The procedure determines the biases, reading level, or some other characteristic of the materials. Berelson provides a comprehensive review and the methodology for the approach from the perspective of communications research. Saario, Jacklin, and Tittle's exemplary research examines sex-role stereotyping in elementary school basal readers and educational achievement tests, they also discuss the presence and ramifications of different curriculum patterns for males and females.

13. **Textbook-criticism approach** Like the content-analysis approach, this one focuses on written instructional material—textbooks. The question is, How appropriate are the textbooks used by schools? Textbooks are analyzed for various reasons, some methodologically motivated and others politically motivated. Methodological efforts attempt to develop new qualitative methods of evaluation based on methods borrowed from literary criticism. Political efforts are less methodologically committed; they use text analysis to make their predetermined purpose of reversing trends in textbook publishing that disturb academicians. In either case, the product of this approach is a detailed understanding of the text material children are exposed to, particularly its

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7See, for example, George Willis, ed., *Qualitative Evaluation Concepts and Cases in Curriculum Criticism* (Berkeley, CA: McCutchan, 1978)

blind spots, overemphases, and influences. Limitations include a preoccupation with material that many students do not even read; this preoccupation diverts our attention from the more significant aspects of schooling.

STUDIES OF STUDENTS

Since students are the recipients of the curriculum, understanding their characteristics and their responses to education allows curriculum developers to provide appropriate curriculums. Antecedents of these studies can be found in the progressive movement, which promoted the analysis of student interests and needs as a basis for curriculum development and resulted in more survey research in the first half of this century.

14. **Misconceptions approach.** One interpretation of "beginning where the students are" is to ask the question, What knowledge and concepts do the students bring to the classroom? The purpose of asking the question is to provide information that enables the teacher to adjust the curriculum to the students' prior knowledge. Underlying this purpose is the realization that most students, although they may do well on achievement tests, fail to understand the basic concepts of a discipline. Instead, they leave courses with the same misconceptions they came with. By focusing research on these misconceptions, researchers hope to solve the fundamental problem. The clinical interview, a method adapted from Posner and Gertzog, dominates this research, although paper-and-pencil tests of content knowledge are also used. The product of the research is a description of student misconceptions to keep in mind when planning curriculum. Virtually all the research has been in science and mathematics. The earliest work was by Piaget and was framed by his cognitive developmental theories. Not until the Soviets' pioneering research in the 1940s and a surge of international interest in the '70s and early '80s did this research proliferate and become less theoretical and more descriptive. Recently, misconceptions research has become more theoretically based, and different theories have tended to differentiate research programs. Even the term misconceptions has become controversial; researchers with a more relativistic psychological and epistemological view prefer alternative frameworks, and researchers with a more anthropological view prefer children's

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The differences among the research programs stem from different theoretical accounts of the sources of misconceptions. Empiricist accounts—which claim that knowledge derives inductively from sensory experience, that knowledge is additive, and that people are born as blank slates—assume that misconceptions arise from either misleading experiences or from faulty instruction. Cognitive accounts—which claim that existing knowledge interacts with new knowledge to transform both during the process of learning—assume that misconceptions arise from cognitive limitations of development, of inadequate schemata (or mental models), of information processing, or of superordinate concepts. Cultural accounts—which claim that the cultural context embedding all knowledge influences both learning and thought—assume that misconceptions arise from differences between the culture and language of students and that of the teacher or academician. Reviews are presented by Driver, Driver and Erickson, and Osborne and Wittrock. Collections of studies are provided in Novak, Novak and Helm, and West and Pines.

15. Conceptual-change approach. One natural conclusion from the misconceptions research is that if students come to class with well-formed ideas, the purpose of research must be to find ways to make the process of changing those ideas easier. The question becomes, What are the conditions for conceptual change, and how can it be facilitated and guided? Although the focus is the process of conceptual change, the methods vary. Conducting clinical interviews before, during, and after instruction, having students think aloud while solving problems, observing students while working, administering...
surveys of attitudes, and giving problem-solving written tests that require students to show their work are all used in this research. The product of conceptual-change research is a set of strategies for overcoming misconceptions. Variations (besides methodological differences) stem from alternative views of how far teachers should intervene in the students' choice of scientific or mathematical conceptions. The strong-intervention position is represented by the research of Smith and Anderson and Roth, which determines the students' prior knowledge ("naive conceptions"), compares it to the correct scientific view ("goal conception"), and then works out in detail a strategy, based on a model of conceptual change, to transform naive to goal conceptions. Clearly, this position would be ethically and morally, if not technically, problematic in controversial curricular topics like evolution. In these cases, conceptual-change teaching would need to be modified to respect personal beliefs and commitments. The theory on which this approach is based is presented by Posner and others and by Hewson and Hewson. Collections of studies can be found in West and Pines.

16. **Analysis-of-experience approach.** In contrast to the two previous approaches that focus on student characteristics, this approach focuses on the student's educational experience. The key question is, How does each individual experience the curriculum? Unlike all the other approaches, the focus here is how the individual experiences the disciplines of knowledge and the social institutions of schooling, not what the individual learns from an educational experience. The distinction between learning and experience has not received a definitive treatment, although the issue clearly centers on a product-process distinction. The approach has developed a methodological commitment to *currere*, an autobiographical method whose product is a detailed account and analysis of the individual's life history. Variants are possible based on the application of *currere* to others (i.e., biographical rather than autobiographical) and on the use of empirical methods for discovering the phenomenological response of groups in the classroom to the curriculum.

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product of this approach is one student’s autobiography or biography. One limitation stems from the approach’s focus on verbal, conscious accounts of experience to the exclusion of preconscious, nonverbal experience and knowledge. Also, because of the uniqueness of individuals, the experiences may be idiosyncratic, with no meaningful pattern identifiable, the individual’s experience may tell us less about the curriculum and more about the individual. Of course, the advocates of this approach claim that these two components are one and the same. Pinar presents the approach and its methodology in its most definitive form.53

STUDIES OF SCHOOLS AND CLASSROOMS

Unlike the approaches that limit the focus of study to one or two aspects of education (e.g., its outcomes, its students, its materials, or its aims), these studies focus on intact classrooms, school buildings, and school systems and analyze the complex transactions that occur there. While the previous approach focuses on the individual and uses methods drawn from the humanities, these next approaches look at schools and classrooms as social systems, using social science methods.

17. Classroom-implementation approach Although most curriculum research focuses on the intended (or official) curriculum as the phenomenon of interest, a growing body of research focuses on what happens to the intended curriculum when it is carried out in actual classrooms. The focus is not the intended curriculum but instead classroom processes that affect the intended curriculum. The purpose is to better understand the processes, ultimately leading to improved curriculum development. The question is, How do the practical aspects of teaching classrooms shape the operational curriculum? The primary method used in this research is the case study, in which intact classrooms are observed intensively over a period ranging from weeks to months. The observer’s field notes are used to produce the main product of the research, the detailed case study. Occasionally, teachers are also interviewed. Limitations derive from the unaddressed problem of translating the research into improved curriculum development. Also, because the research is concerned with classroom processes, it ignores the school and community influences on the curriculum. The works of Doyle and Doyle and Ponder provide examples of this approach.54


18. **Hidden-curriculum approach.** Whereas most of the previous approaches study the academic curriculum, whether intended or operational, this approach seeks to understand the school's implicitly (though effectively) taught norms and values. The question is, What ideologies do schools really teach, and how are they taught? The covert teachings of the school (e.g., an achievement and marketplace ethic or an attitude toward authority and conflict) and how they are accomplished are the phenomena of interest. The approach has no methodological commitment, though case studies of individual classrooms or school systems seem to be a common strategy. When the method of work entails a content analysis of text materials to uncover the "hidden curriculum," the distinction between this approach and approach 10 disappears. The product of this research is a deeper understanding of how schools (and their curriculums) function in a societal context and, in particular, the kinds of implicit messages schools and classrooms give to students. Limitations of this approach are primarily methodological and stem from the danger of generalizing from a case study of one classroom or one school system to all of schooling. The case studies of Anyon, Apple and King, and Jackson are examples.55

19. **Portrait-of-schools approach.** This emerging approach focuses on schools, looking at them comprehensively, their teachers, their students, their communities, their administrative leadership, their ambience, as well as their curriculums. The purpose of the research is to provide a better understanding of schools as organic wholes. The question is, How do the various factors within a school determine that school's distinctive character and the quality of the educational experience? The method used is ethnographic, and the product is a set of portraits of schools, showing both the unique aspects as well as the commonalities among the schools. Some researchers focus only on "good" schools in an attempt to better understand what makes a school "good."56 Others look at typical schools as a basis for making recommendations for school improvement.57 One limitation stems from the focus on the school, which ignores the broader social, economic, and political influences on the school as one of many societal institutions.58 Other limitations stem

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more from the studies' recommendations for school improvement than from the research itself. The difficulty with studies of schools is that the more systemic the study finds the problems and solutions to be, the less reformers can do to ameliorate the situation.

20. **Historical-studies-of-schooling approach.** Rather than study schooling as it exists today, we can learn from the past. Historical studies address the question, What was schooling like in the past, and what caused it to be that way? The focus in this research is not only the school, as in the previous approach, but the cultural, political, economic, and social forces that shape society and its institutions. The product of historical studies is a rich account of schooling in the past and how societal forces affected it. Differences among studies derive mainly from the ideological position of the researcher. For example, Ravitch tends to be more conservative, whereas historians like Franklin tend to represent a middle ground between conservative and critical perspectives.

The inherent limitation of any historical study begins when we attempt to use the past to predict the future. However, this limitation does not prevent us from developing a fuller understanding of the present by understanding past events. Major historical studies concerned at least in part with the curriculum include Cremin, Franklin, Katz, Kliebard, Krug, and Ravitch.

21. **Large-scale-demographic or descriptive approach.** Walker claims we must establish baseline information on what happens in schools. The key question, then, is, What content is being explicitly taught, how is it being taught, and how much emphasis is each topic being given? The phenomena of interest are the events and materials of instruction in representative classrooms that are obtained through questionnaire, observation, or interview methods. The product is baseline-descriptive information, which is supposed to serve a purpose in education similar to that served by data on temperature and humidity in meteorology or census data in demographic analysis. Limitations of this approach include the failure to determine cause and effect or

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even effects, for that matter. Also, selective reporting may invalidate findings, or an observation itself may change what is taught. Walker presents proposals for the approach, Harnischfeger and Wiley present a model of the teaching-learning process, which relies heavily on this approach; Holmes, Mann, and more recently, Monk represent examples of this approach. Goodlad's study of schooling is the most ambitious and comprehensive research of this sort to date.

THE CONCEPTS OF RESEARCH AND CURRICULUM AND THE DIVERSITY OF APPROACHES

Curriculum research encompasses many possible activities. If we assume that each approach can be considered curriculum research for conceptually valid reasons, let us consider the implicit concept of research and of curriculum. In a sense, the fundamental question at the heart of each approach reflects a concept of both research and curriculum. When stated generally, we can analyze the question in two components: its form and its object. The question's form implies the approach's concept of research; the question's object reveals the approach's concept of curriculum.

The range of concepts of research and of curriculum is broad. Questions range from strictly evaluative (e.g., Which one is better?) to descriptive (e.g., How is it experienced?), from which are what questions to how and why questions. They range from investigations of processes to investigations of consequences to analyses of explicating meanings. They range from questions with primarily methodological commitments to questions with substantive commitments. Obviously, we have a mixture of research concepts.

Similarly, when we turn to concepts of curricular phenomena, we find a diversity of components of the educative process. Referents range from whole subject-matter areas and broad categories of content to educational ideologies to educational planning to educational aims and goals to instructional materials to schools and classrooms to the contents of students' minds to the teaching-learning process itself.

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64I do not claim that each approach is, or that its proponents claim it to be, a curriculum research approach. The exercise that follows investigates the implications of regarding each approach as a curriculum-research approach.
Diversity is again evident if we try to identify the kind of audience the research is intended for. Appropriate audiences range from educational administrators and program evaluators to classroom teachers to curriculum theorists to curriculum developers to school reformers to other curriculum researchers. Obviously, these audiences overlap, and any particular approach is appropriate for more than one audience. But for whom is the product of this research primarily intended?

COMPATIBILITY OF APPROACHES

After having analyzed (or even overanalyzed) the approaches, we might ask synthetic questions: To what extent are different approaches compatible? What is the potential for combining approaches to capitalize on strengths and minimize limitations and weaknesses?

First, the division of the field into coherent research approaches is somewhat arbitrary. What for me is variation in one approach might be three different approaches for someone more familiar with the particular area. Similarly, what for me might represent a hybrid of two or more approaches might represent a single, coherent approach for someone else.

For example, let us consider one hybrid research program that has proved fruitful and could alternatively be described as another approach, the retrospective-case-study approach. This approach borrows the methods of the classroom-implementation approach (but focuses on schools rather than classrooms) and historical approaches (but focuses on analyzing a single curriculum implementation rather than general schooling practices). This approach, like the classroom-implementation approach, seeks to understand the curriculum-implementation process to make the process more effective. The key question is, What happened when curriculum X was implemented in situation Y? The curriculum-implementation process itself is the phenomenon of interest, especially those past cases marked by successes or failures. Thus, the retrospective-case-study approach is similar to the study of airplane crashes, postmortems, and films of past games. The method of work is interdisciplinary (drawing on historiographic methods) and entails identifying the critical points, determining how far implementation models apply and where they apply, and determining the extent to which these models exhaust the interesting features of the phenomenon. The product of the inquiry consists in explanations of the dynamic relations among many factors. One limitation of the approach stems from the difficulty in attributing cause and effect because of a lack of controls. Another limitation derives from the somewhat artificial separation of curriculum development from curriculum implementation.

Walker presents a proposal for this approach.66 Atkin and House, Grobman, Kallos and Lundgren, McKinney and Westbury, and Popkewitz, Tabachnick, and Wehlage provide examples.67

Other hybrid approaches could be described. The categories presented here are meant only to provide one organization for what might otherwise seem to be an incoherent field. The categories should be used to suggest new research programs, not to limit research to these categories. Possibilities for synthesizing research approaches is the major implication of my analysis.

Approaches that embody only methodological commitments are most easily synthesized, resulting in research that attacks a given problem in different ways. For example, the question of the validity of studying science might be attacked philosophically (approach 11) by first developing justifications for it (e.g., to promote scientific literacy). Then we might use the products of this research to analyze what is meant by "scientific literacy" to clarify the concept (approach 10). Another step, independent of the first two, might be to develop a set of tests to measure science achievement to determine whether students do, in fact, learn what is taught (approach 2) and to find out what else they learn (approach 3). Then we might develop indicators of scientific literacy based on our conceptual analysis (i.e., based on the results of approach 10). Finally, we might follow the students for a year or more to find out whether, having learned what we intended, they turn out to be more scientifically literate (approach 4), and what the costs are in getting them to be that way (approach 5).

Another research program might reflect a concern less for long-term educational payoff and more for the present reality of students. We might begin our research study by analyzing reports of scientific findings into their key concepts, telling questions, knowledge and value claims, and methods of work to "unpack" the discipline into its potential meanings (approach 7). Then we might analyze the students' experience in this discipline as they interact with various kinds of instructional materials, from reports in scientific journals to textbook accounts of scientific findings to laboratory experiments performed by the students themselves to autobiographical accounts of a scientific discovery (approach 16). This analysis could be performed through

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interview techniques, analysis of student journals, questionnaires, and projective techniques, among others. The study would attempt to illuminate how a student experiences the teaching-learning process, how the structure of knowledge influences that experience, to what extent there are transpersonal experiences, and how much the presentation mode and the structure of knowledge influence experience (either idiosyncratic or transpersonal).

Although the commitments of each curriculum-research program differ substantively, they are not incompatible. Although a program might be committed to determining inputs and subsequent outputs of the educative process, the researchers could still investigate student-processing variables such as the student’s phenomenological response to the study of science (approach 16). In fact, including these processing variables would presumably help the researchers explain the kinds of outcome (both short- and long-term) that occur as a result of studying science.

Similarly, the commitment to understanding the student’s educational experience should not stop us from attempting to determine how the quality of that experience contributes to various immediate learning outcomes (approach 3) or even out-of-school consequences (approach 4). A similar synthesis of research approaches applies to the study of curriculum development and implementation processes.

NEXT STEPS

Research efforts should complement one another whenever possible. Of course, we feel a competitive pressure to promote a particular approach to curriculum research and to denigrate others. We get impatient with our colleagues (competitors?) because they are not doing what we are doing. Their work represents other value systems, and we compete against them as if we were in a marketplace. However, it is doubtful that there is one “best buy” in this enterprise. Assuming that increased cooperative efforts among curriculum researchers with differing substantive or methodological commitments is desirable, what can we do to increase our efforts? First, we can perform further analyses of curriculum-research approaches. The 21 approaches described in this article are neither exhaustive nor fully explicated. Additional research approaches should be analyzed in terms of their telling questions, purposes, methods of work, phenomena of interest, products, variants, and limitations. Further, each approach described here should be further analyzed in terms of its value claims and its proven fruitfulness for furthering or improving curriculum research, theory, or practice. Finally, the potential effect of each approach (both separately and in combination with other approaches) on our understanding of the educational process and on the improvement of educational practice should be estimated. Through concentrated effort, coher-

I am grateful to Madeleine Grumet for this point.
ent and cumulative curriculum theories and associated curriculum-research programs could evolve with the ultimate goal of improving the quality of the educational process.69

GEORGE J. POSNER is Associate Professor of Education, Department of Education, Cornell University, Roberts Hall, Ithaca, NY 14853-5901.

This curriculum text bridges the gap between curriculum theory and practice. It focuses on both foundational issues and specific guidelines for curriculum practitioners. The ten chapters deal with foundations of curriculum, a model for development, design, organizing content, scope and sequence, course and grade level plans, instructional units, curriculum change, and evaluation.

—Richard W. Grove

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