# Introduction: Understanding Curriculum Inquiry

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Curriculum research involves establishing the aims or ends of education and other aspects of schooling, clarifying the concepts central to the enterprise, working out what is logically required for organization and method by the nature of the enterprise, establishing insofar as we can what social, psychological, and administrative factors may have what effects on success at achieving our aims in practice, describing contingent and logical restraints and demands on procedures of implementation and evaluation, and prescribing procedures for them. Each of these elements has to be approached in a different kind of way, yet each of these elements has to be given due attention if we are to make reasonable curriculum proposals. Curriculum research must therefore involve interrelationship (Barrow 1985: 36).

Those who are familiar with the real world of curriculum will find Barrow's characterization of curriculum research quite understandable and credible. It implies, first of all, that curriculum research is related to a cluster of practical activities focusing on conceiving, expressing, justifying and enacting educational programs. These curricular activities involve making choices on a variety of issues which, when taken together, form both substantive and practical guidelines for governing these programs. If these choices are to be informed choices, they must be made with full knowledge of the relevant research that relates to such choices.

Besides implying that curriculum research is related directly to doing practical curriculum activities, Barrow's statement also implies that doing curriculum research is not the same thing as making practical curricular choices. Curriculum research involves seeking and justifying the knowledge that is relevant to the making of such choices. It is an enterprise that involves undertaking formal inquiry to generate relevant knowledge. Curriculum activities and decision-making are, after all, matters which have been engaged in repeatedly by many people in the past, and the attempt to learn something useful about this practical enterprise through formal inquiry and study

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seems to be a reasonable way of approaching these matters. The problem is to decide what curriculum research should be done and how to do it.

Barrow implies that no matter how interrelated the various facets of practical choice-making in curriculum may be and no matter how interrelated curriculum research needs to be with these practical curriculum choices, curriculum research must operate by theories and principles of procedure that are determined by the kind of research knowledge that is sought. Every research effort focuses on some particular knowledge need, on some particular research question, and not every research question can be approached in the same way. Barrow reminds us that different forms of inquiry are necessary to address different kinds of curriculum research questions. Indeed, curriculum research involves the use of multiple forms of inquiry.

In this introductory essay, I want to discuss the field of curriculum research as a whole, how it is similar to and how it is different from other fields of research, and why its methods of study have become more differentiated in recent years. This general understanding of the nature of curriculum research (I prefer to call it curriculum inquiry) will provide a useful frame of reference for the chapters that follow on various forms of curriculum inquiry. Since no previous book has attempted to describe the field of curriculum inquiry as a whole and the various forms of inquiry used within it, this particular formulation presented in this book must be considered the unique perspective of the editor and author of this introductory essay. Nevertheless, it is a perspective that attempts to reflect the way curriculum inquiry is rather than how I think it ought to be.

#### The Nature and Structure of Curriculum Inquiry

Curriculum inquiry is a species of educational research or inquiry. As such, it addresses particular kinds of educational research questions related to formulating curriculum policies, developing curriculum programs, and enacting these policies and programs. Curriculum inquiry involves identifying those curriculum questions that are amenable to inquiry, knowing what form of inquiry to use in attempting to answer those particular questions, and carrying out the appropriate processes of inquiry in order to obtain those answers.

To understand the nature and structure of curriculum inquiry, we need to understand its relation to inquiry in general, its structure, its relation to curriculum practice, its current status and problems, its special features as a field of practical inquiry, and the necessity of employing multiple forms of inquiry in addressing curriculum research questions. Each of these topics will be discussed in turn.

#### The General Nature of Inquiry

Inquiry is an intellectual activity in which we seek to find out something not yet known or clearly understood. Inquiry is prompted by the need to have reliable answers to certain perplexing questions. The need to have certain questions answered is an experience we all share; all of us engage regularly in some kind of inquiry. We may do so individually or in groups. We may do so formally or informally. We may discover that some questions we attempt to answer prove to be quite difficult to answer and that some are impossible to answer. The intent of inquiry, nevertheless, is clear: "Inquiry is an activity which produces knowledge" (Churchman 1971: 8).

Scholarly inquiry differs in function and approach from the more informal type of inquiry that we do in connection with our everyday activities. In many circumstances when we have questions for which we need answers, we turn to persons or sources that have the answers we need. We may assume that they are correct and trustworthy answers, try to understand them as best we can, and proceed to use them. So much of what we learn in school and in life involves this kind of informal inquiry that we may fail to realize that much of the knowledge we draw upon has its genesis in more formal scholarly inquiry. It is the function of this more formal kind of inquiry to provide reliable answers to new questions as they arise, questions that have never before been asked, or if they have been asked, have never been answered satisfactorily. Scholarly inquiry requires the use of painstaking and disciplined thought processes whereby answers to researchable questions can be established and verified until they can be taken with confidence as reliable by those who are not themselves involved in doing the necessary scholarly inquiry. The knowledge generated through scholarly inquiry and its various ways of knowing are of fundamental value for us to learn if we are to have access to trustworthy knowledge for use in our everyday activities and specialized pursuits (Eisner 1985b).

The problem of assessing the trustworthiness of scholarly knowledge is a persistent one for layman and scholar alike. Knowledge in most domains is not fixed once and for all. Certain questions are reopened from time to time because flaws are detected in the way answers were previously generated. How does anyone know whether those doing scholarly inquiry have conducted their inquiries appropriately and accurately and whether the answers to the questions posed are reasonably reliable? It helps to know something about the procedures and methods that are employed in formal inquiry and to be able to critically assess both the inquiry processes and the answers arrived at. Because there is considerable specialized knowledge and training involved in doing formal inquiry well, it is often difficult for the non-specialist to be knowledgeable enough about what is involved to be able to distinguish trustworthy inquiry from untrustworthy inquiry. Under these circumstances, it is particularly important that scholarly inquiry be done with as much skill and competence as possible so that the answers given to questions asked can be considered to be reasonably reliable.

Scholarly inquiry is a specialized intellectual activity in which relatively few people are engaged. We rely on these few people to engage in scholarly inquiry on behalf of the rest of us. They are expected to take the time and trouble necessary to do systematic inquiry and to check and recheck, individually and collectively, both their inquiry processes and their results. Many of these people are engaged in formal inquiry full-time, but for a great many others formal inquiry is only an occasional or part-time activity. Regardless of how much or how little formal inquiry they do, we expect them to be experts in this intellectual activity, to know how to do a particular kind of inquiry, and to be able to do it competently.

A system of training in doing a particular kind of research is usually prescribed and is undertaken by those who wish to become certified experts in a chosen field of inquiry. Some people, of course, master more than one mode of inquiry, but more often than not expertise is acquired in a single mode, or in a few related modes, because the complexities involved in learning to use them properly are often quite challenging. Experience in using a particular mode of inquiry is essential, and the more experience a person has in using a particular approach the more skill and competence that person is likely to develop. Unfortunately, after initial training is completed, there is seldom much quality control that can be exercised over the formal inquiry done by a particular individual, except as criticism may be extended by competent colleagues at scholarly meetings or through the screening of material presented for publication to refereed journals and book publishers. There are, admittedly, some persons who do scholarly inquiry that is somewhat weak, but there are many as well who do very high quality work.

Like scholarly inquiry in general, curriculum inquiry is a specialized field of research requiring trained experts who understand the nature and purpose of inquiry generally and are competent to conduct specialized research in curriculum by means of appropriate forms of inquiry. It will become clear from the chapters that follow that doing curriculum inquiry requires considerable knowledge and experience in selecting and carrying out accepted formal inquiry processes associated with any of these forms of inquiry.

## The Structure of Inquiry

How is scholarly inquiry organized? Curriculum inquiry, or any field of formal inquiry, has an internal structure or organization that needs to be understood by all who engage in it or utilize its results. A field of inquiry is usually composed of several domains of inquiry, each of which may involve

the use of several different forms of inquiry. In the long history of the development of scholarly inquiry, more and more differentiated fields of inquiry have been generated (King and Brownell 1966; Schwab 1978; Tykociner 1964). Today a wide array of distinct fields of inquiry exist. Some of these are referred to as academic or basic disciplines (Martin 1970; 1981; Phenix 1964a; 1964b; Schwab 1964). Formal inquiry in each of the academic disciplines, e.g., in physics, mathematics, music, or philosophy, addresses unique questions defined by the discipline itself without regard to the application or use of the answers to these questions outside the discipline. Indeed, much of the knowledge generated within a particular discipline cannot, by its very nature, be applied or used outside the context of that discipline. Those fields of inquiry having the explicit purpose of applying or using knowledge from the basic disciplines are usually referred to as applied disciplines. Such fields of inquiry as mineral economics, rural sociology, medical ethics, and geopolitics are included in this category (Cronbach and Suppes 1969; National Academy of Sciences 1977; Storer 1964; Tyler 1976).

Quite different from either the academic or the applied disciplines are those practical fields of inquiry that have developed in relation to some realm of practical human activity, such as criminal justice, law, medicine, education, electrical engineering, home economics, business, or greenhouse design. Each of these broadbased fields of practical inquiry may be further divided into narrower, more focused fields of inquiry. For example, education as a broad field of inquiry includes subdivisions devoted to inquiry related to teaching, administration, curriculum planning, and policy making, as well as to educational psychology, educational theory, comparative education, teaching methods in language for early childhood education, and a number of others. Several of these subdivisions correspond to particular subdivisions that exist within the realm of educational practice. but others do not seem to focus on any particular aspect of practice. The separation of a field of practical inquiry into a series of identifiable subdivisions usually results from conventional coalescence of research interests rather than from logical analysis or ease of accessibility for practitioners.

The field of curriculum inquiry, with which this book is primarily concerned, is itself gradually becoming further differentiated into a variety of inquiry domains and subdomains. There is, however, little consensus among those doing inquiry in the curriculum field about what these domains should be. A number of schemes have been used or advocated in the curriculum inquiry literature for structuring inquiry and the resulting curriculum knowledge (Rosales-Dordelly and Short 1985: 23–26; Short 1985). None of these has yet taken on conventional status. There is much overlapping among domains and much confusion about where to locate a particular topic of inquiry and related studies. In fields of inquiry that are relatively new, like the field of curriculum inquiry, it can be expected that alternative schemes for organizing the field into fairly well-established domains of inquiry will compete with each other for some time before a dominant pattern emerges. The very fluidity of a field of practical activity such as curriculum practice may also contribute to the appearance in the field of curriculum inquiry of new and competing domains of inquiry. Standard questions and replicated studies are not as characteristic of practical fields of inquiry as may be true in the basic disciplines, and so, frequent changes in the way the structure of curriculum inquiry may be conceived is likely to occur. This whole matter of domain identity is of no great consequence unless its changing and multifarious character makes it difficult to locate related inquiry or inhibits the application and use of this inquiry. Nonetheless, it is well to know how a field of inquiry is structured and how to find one's way around in it.

All fields of practical inquiry, including curriculum inquiry, are in reality composite fields. Several domains of inquiry exist side-by-side within such a field of inquiry, each focusing on a different aspect of the practical activity toward which inquiry may be addressed (Freeman 1973). Each domain consists of a series of related topics and questions to be addressed (or already addressed) by formal inquiry processes, along with the answers to those questions, and the relevant sifted knowledge accumulated from all studies done within that domain.

Subdomains can also exist whenever distinguishable components become the focus of inquiry. For instance, if the curriculum development process is the focus of an entire domain of curriculum inquiry, subdomains devoted to questions about setting objectives, selecting content, organizing instruction, or evaluating a program may appropriately be among those embraced by the domain as a whole, and inquiry related to any one of these subdomains may be carried out whether inquiry in other subdomains occurs or not.

The process of identifying and establishing particular domains of inquiry in curriculum, or in any field of practical inquiry, is obviously not an entirely rational process; neither is it solely an arbitrary one. The questions and answers that are included within a given domain of inquiry necessarily relate to some aspect of concrete curriculum practice. The acts and events of practice, however construed or distinguished from one another, become the basis for whatever domains of curriculum inquiry are proposed.

The acts and events of curriculum practice occur as entities, as wholes. They cannot be divided arbitrarily into parts which correspond to some analytic scheme which may be possible to create mentally. To attempt to do so would distort the reality of these acts and events and substitute mental constructs for real ones. These acts and events come whole and must remain so

if we are to deal with the reality as it presents itself to us and not deal merely with a thought or idea for which there is no corresponding reality. Domains of inquiry in practical fields such as curriculum must, therefore, be distinguished in ways that respect existing acts and events as entities or wholes rather than using analytic categories to distinguish them. If they are not distinguished in this way, inquiry may proceed on matters that exist in name only and do not relate to actual curriculum acts or events. Witness the difference between inquiry attempted on reading comprehension and on decoding individual words. Comprehension is a whole; decoding word-byword may not be a necessary element of comprehension.

Here again a difference between basic disciplines and fields of practical inquiry is apparent. In many of the disciplines, at least some of the time, it is possible to ask and answer questions that relate solely to ideas and not to acts or events. In some cases, whole domains have arisen that have been distinguished from each other by analytic distinctions rather than actual ones. The domains of mathematical inquiry provide the best examples of this.

The problem of domain identity within the field of curriculum inquiry is one that cannot easily be resolved. This book does not attempt to resolve it. While it may be helpful to engage in critiques of existing domain distinctions and to offer alternative ones for consideration, it will no doubt require influences and actions other than scholarly ones for any one scheme to achieve widespread acceptance in the field of curriculum inquiry. There are some curriculum scholars who think no single scheme should become dominant because it might inhibit inquiry. There is some validity to this point of view.

In summary, all inquiries in the field of curriculum focus on certain aspects within particular domains of curriculum inquiry however they may be defined or distinguished. Understanding how these curriculum elements and domains may be structured is fundamental to designing and carrying out particular instances of curriculum inquiry.

## The Relation of Inquiry to Practice

Consider the truism that before there is *inquiry*, there is *doing*, or at least the need to *do*. Action can be taken, and often is taken, before or without conducting formal or informal inquiry related to the action. This certainly has often been the case in much of curriculum practice. Nevertheless, the value of taking considered action, rather than acting before thinking carefully, is recognized as being quite desirable. The problem is to see just how action and inquiry may be most appropriately related.

The matter of the relationship between action and thought has been a

perennial problem that has perplexed the best of scholars throughout human history (Gotshalk 1969; Hampshire 1982; McKeon 1954; Toulmin 1976). Should not thought be taken before acting or doing? If so, what kind of thought? How does one do the required thinking? And how does one use this when acting? These questions are the subject of much philosophical investigation; they remain largely open and unsettled.

Yet having inquiry of certain kinds available makes it possible for practitioners to do different things than they might do in the absence of such inquiry. Curriculum *inquiry* is assumed to have some requisite value for curriculum *action:* it has a practical purpose, to inform *curriculum action*. It is not an intellectual pursuit carried on for the sake of mere curiosity or for possible application to some other field, as is true of the academic disciplines in the sciences and the humanities. Curriculum inquiry exists only to help deal with an activity that must be done whenever people are to be educated in some organized way over time, that is, whenever curriculum must be developed and enacted.

Practical curriculum activity involves problems of decision and action, judgment and enactment. Curriculum inquiry involves answering questions for which definite answers can be obtained; it attempts to answer particular questions and to provide knowledge or understanding about them. Curriculum practice is action-oriented rather than inquiry-oriented. Getting something done is the essence of curriculum practice. As in all fields of practical activity, curriculum practice involves deciding what should be done to bring about a desired state of affairs, in this case toward an educative result through some curriculum processes, and then acting upon that decision. Curriculum inquiry, on the other hand, is a highly disciplined intellectual activity in which some formally justified logic of procedure is employed to obtain a confirmable answer to a researchable curriculum question that has been isolated for inquiry.

If we assume that curriculum practice is concerned with specifying, justifying, and enacting desired educative actions (what is to be taught, to which persons, under what rules of teaching, and how these shall be interrelated; Kliebard 1989), then the particular activities involved in doing curriculum practice can be (and have been) identified rather clearly through empirical investigation (Foshay 1980; Glatthorn 1987; Reid 1978; Vallance 1983). They tend to fall into domains of curriculum practice such as curriculum policy making and evaluation, curriculum program development, and curriculum change and enactment. Curriculum inquiry is concerned with answering specific questions related to any of these domains of curriculum practice about which knowledge and understanding is sought.

Until recently, most of the attention of practitioners and thoughtful academics in curriculum was devoted to the problems of doing curriculum;

their attention was directed largely to the activities associated with curriculum planning and designing. The emergence in the 1960s of a small cadre of research scholars in the field of curriculum marked the beginning of a self-conscious community of scholars who asked more fundamental questions about the whole enterprise than had previously been asked. No longer did it seem legitimate simply to pass along good practices and wisdom from those authorities who claimed wide experience in doing curriculum activity. Scholarly motives prompted the desire to qualify the sharing of this valuable experience with a degree of justification based on research and theory. The evolution of this expanded interest in curriculum research and inquiry has been traced elsewhere by Eisner (1985a), Schubert (1986), Short (1987), Short, Willis, and Schubert (1985), and Taylor (1979).

The number of research articles and books published in curriculum over the last twenty-five years suggests that curriculum practice should be benefiting tremendously from this increased research activity. Yet why curriculum knowledge is needed at all, let alone knowledge that is both useful and pluralistic in character and derivation, is for many curriculum practitioners (and for some curriculum scholars as well) problematic and not at all self-evident. Without an abundance of recognized and frequently drawnupon curriculum knowledge, it is difficult to make a case for utilizing this sort of curriculum knowledge. In fact, it must be admitted that it is rare to find persons who are engaged in any domain of curriculum-related activity who deliberately and routinely seek out and utilize established curriculum knowledge.

Yet, the value of curriculum knowledge is much the same as the value of knowledge of any kind, and the case for generating it is no more difficult to justify than the case for any kind of knowledge. First of all, there is the argument from the negative: that knowledge is better than conjecture, halftruth, prejudice, superstition, and other undisciplined, uncritical thought forms. The history of the use of these other thought forms is so riddled with undesirable consequences that we should be drawn to a reliance upon those thought forms that have survived the careful and disciplined processes of formal inquiry and have thus achieved the status of "knowledge." We have enough trouble coping with life's activities when knowledge is the mainstay of our discourse; we have no reason to expect an advantage from drawing on less valid thought forms except when we have no disciplined knowledge available to us for our use. A second, more positive argument asserts that since knowledge is public, that is, since it is open to verification by all and is thus warranted by virtue of our common capacity to be persuaded by sound processes of reasoning and logical argument, knowledge is the vehicle par excellence by which we may communicate intelligibly with one another and solve problems of mutual concern with language that facilitates common understanding and efficient judgment. Without public knowledge, we languish in confusion and in aimless and unproductive discourse.

Still, it is not clear that the results of curriculum inquiry have deliberately and consistently been used in the doing of curriculum work (Short 1973: 283-284; Short, Willis, and Schubert 1985: 1-22, 66). There are several possible explanations for this state of affairs. Researchers may have addressed matters not considered useful or relevant to the actual doing of curriculum activities. Thus, research, even if available, may not seem credible. It may be too esoteric in its presentation. There may be reason to question the research methods employed, and consequently, confidence in results may be lacking. The scope and sophistication of inquiry required by the exigencies of practice may have escaped the research being done. These are empirical matters on which definitive information has not yet been collected. Just why this gap exists between curriculum research and practice needs to be more fully studied, and an analysis of its nature and dimensions needs to be more clearly understood before corrective action can be taken. If curriculum inquiry is to make a significant contribution to dealing with curriculum problems, it must be conducted with a clear understanding of what is relevant and how best to present its results. Congruence of intentionality between the researcher and the practitioners in the field of curriculum is the prime requisite for inquiry and practice to be meaningfully related.

# Factors Affecting Quality and Status of Curriculum Inquiry

Regardless of the current status of curriculum research and its relevance to curriculum practice, the quality of inquiry in the field of curriculum depends upon the expertise with which it is conducted. Critics have suggested that inquiry in curriculum ranges broadly from rather poorly done work to quite sophisticated, expertly done studies (Rosales-Dordelly and Short 1985). That it is not uniformly of high quality should be of concern to everyone interested in curriculum research or practice.

Part of the disparity in the quality displayed among individual curriculum studies is due to the fact that there is no single, relatively cohesive method of research applicable to curriculum inquiry that can be mastered and then utilized routinely thereafter for all curriculum studies. A multiplicity of research approaches is possible and germane in curriculum inquiry. Curriculum researchers commonly learn to conduct a number of different types of research in the course of their careers without formal training or mentoring; as they attempt each new approach, they acquire the skills necessary to perform each of these types of research.

Curriculum researchers seldom have the luxury of being formally trained in each of these forms of inquiry. They find that the range and variety of curriculum research questions call for expertise in a variety of different forms of inquiry which they must acquire on their own initiative. No doubt these circumstances contribute to weaknesses noted from time-to-time in some curriculum research reports.

### Features of Inquiry in a Practical Field

What are the particular activities involved in doing curriculum inquiry? How readily are they identifiable? The answers to these questions are not easy to provide. There is no single inquiry process that is associated with doing curriculum inquiry; a multiplicity of different inquiry processes can be identified for use in conducting curriculum inquiry. Not all of them are widely known, but they are available for use in answering various kinds of curriculum research questions. No one inquiry processes is capable of addressing all questions so a number of different inquiry processes have been developed, each one suited to answering specific kinds of questions.

The primary purpose of this book is to acquaint readers with the activities involved in utilizing a wide variety of forms of inquiry related to the field of curriculum studies. These research approaches are, of course, not unique nor limited to studies in the curriculum field. They can be used in any kind of educational research field or in any field of practical research as well. Nevertheless, their use in curriculum is increasing, and the distinctions among them, as well as a clear grasp of the circumstances under which each may be appropriately utilized, are important to convey to all who would engage in curriculum inquiry or who wish to interpret reports of inquiry done by others.

How does inquiry related to a field of practical activity such as curriculum differ from inquiry related to a discipline? And why is a multiplicity of research approaches necessary rather than a single one?

First, in a field of practical activity, the problems are primarily related to doing something rather than to knowing something, as suggested earlier. Doing is best accomplished in the presence of knowing, but it is the taking of action that is the fundamental characteristic of all practical activity. Knowledge and understanding are instrumental to the action. Establishing knowledge claims by acceptable forms of reasoning is the purpose of an academic discipline. This is a rational intellectual process that ends there; disciplines do not concern themselves with knowledge use or application.

Second, practical activities involve people who do something in situations; what is done is the result of decisions by people. Either as groups or individuals, they take into account goals and purposes, possible actions for achieving them, and relevant knowledge, information, and values, and then make judgments on a course of action to be taken, following this up with the taking of action. The human element in a discipline is directed by the requirement to confirm knowledge assertions through intellectually verifiable means. In a practical activity the human element is directed by the requirements of personal or corporate commitments and responsibility, of making judgments and defending them in situations, and of acting. Because persons in relationships with other persons are central to practical activity, there is a wider range of human capacities involved than are involved in establishing and verifying knowledge claims in a discipline.

Third, all actions and events involving human beings occur as entities, as wholes. It is possible for intellectual convenience to analyze something or attend only to one part of a phenomenon at a time, but in the real world of human activity everything that is done occurs as wholes and must be recognized as such. If we impose an analysis or partial perception on what presents itself to us, we do not grasp the reality accurately. Wholes are often difficult to understand, but we must know when we are dealing with whole entities and when we are mentally separating parts of the whole for clearer analysis.

Each of the academic disciplines is constituted to examine one thing at a time, one limited question at a time, by a mode of inquiry capable of dealing only with that particular kind of question. There is no other way of doing inquiry successfully, given the limitations of mind, language, and reasoning. But we should not think we have knowledge of wholes as a result of this process. Every attempt to divide wholes into manageable researchable guestions misses something, even if we try to synthesize all the answers to all the separate questions. (And how do we know we have identified all the right questions?) Of course, we cannot escape doing this in trying to understand wholes, but there is an inevitable discontinuity that results from trying to match up the results of research from all the different questions which were investigated by different forms of inquiry. Practical activity cannot proceed by this analytic and arbitrarily focused method of an academic discipline. We must act for good or ill in response to human beings and situations as wholes. Thus, in trying to do inquiry related to wholes, we face a most difficult task. If we are not to distort reality by resorting to the use of disciplinary forms of inquiry, how then are we to do inquiry on wholes? What kind of knowledge is going to be of most value in fields of practical activities like curriculum?

Research in curriculum, as in all fields of practical activity, must be multidisciplinary and transdisciplinary in nature. That is to say, we need to know everything about a whole that we can possibly know. If, for instance, we are planning curriculum and wish to know whether to formulate our plans around curriculum objectives or some other kind of conceptual organizer, we might turn to research that documents and interprets the experience of others in this regard, to scientific studies of what happens under

various options, to historical studies that sum up the cumulative experience, to philosophical studies that critically examine this evidence in relation to various kinds of criteria, and to any other kind of research that may seem relevant. While these various pieces of knowledge will not fit together neatly into an integrated pattern or whole, it is not difficult to believe we would be in a better position to make our choice about organizing curriculum around objectives or something else if we had this wide range of knowledge available to us than if we did not have it. At the very least, knowledge from one or two perspectives alone would present too limited a picture of what we would like to know in order to make an informed decision. Even with all possible disciplinary approaches focused upon a single whole issue or possible action, we may feel at a loss in making such decisions. We may require some transdisciplinary perspective that helps us conceptualize and evaluate the very problem we are confronting in practice. Many of the policy- and action-oriented forms of inquiry provide assistance of this kind. For this reason, a practical field of activity is most closely linked to research through what has been called deliberative or action inquiry approaches that are characteristically transdisciplinary in nature. Curriculum inquiry, therefore, keeps central a focus upon the type of human decision and/or action being studied (Schubert 1980, 1986a; Strike 1979) while asking subsidiary questions and answering them by multiple forms of inquiry. It then uses this knowledge conjunctively in answering the ultimate question, "What is to be done step-by-step in order to bring about the desired curricular result?"

#### Multiple Forms of Inquiry

All fields of practical inquiry employ multiple forms of inquiry rather than a single form of inquiry to address their questions and obtain their answers. Unlike the basic and applied disciplines in which a particular form of disciplinary inquiry is used in each discipline, practical inquiry utilizes many different forms of inquiry. Many of the disciplinary forms of inquiry may be used in practical inquiry, but in addition, multidisciplinary and transdisciplinary forms of inquiry may also be used. And these multiple forms of inquiry are appropriate within several different domains of inquiry; seldom is a single form of inquiry identified with a particular domain of inquiry.

Why are multiple forms of inquiry necessary in fields of practical inquiry? It is because of the kind of the questions that are asked. Because many of the questions that give rise to inquiry in a realm of practical activity are holistic rather than analytic in character, most of the processes defined by the academic disciplines are not well suited for answering these kinds of questions. The disciplines require that questions be conceived and worded in a particular way such that they are amenable to the forms of inquiry associated with each discipline. This is well and good if the inquiry is being conducted for its own sake, that is, just to see what the answers to the questions are. But if there is a real-world imperative to have a particular practical question answered, rewording the question to fit the inquiry tools available is really not acceptable. One should search for approaches to inquiry other than these disciplinary ones and match the inquiry processes to the demands of the actual questions being asked (Dillon 1984).

The problem, of course, is whether we can identify alternative forms of inquiry that are appropriate for these more holistic questions that arise naturally in practice and whether we can distinguish the kinds of questions each is capable of addressing. It is largely to this problem, as it is represented in the field of curriculum inquiry, that this book is directed. We shall see that a number of forms of inquiry have been identified, formalized, and utilized in attempting to address different kinds of curriculum questions. The need is to disseminate these approaches more widely, to stimulate more scholars to use them in appropriate studies, and to clarify, extend, and critique our knowledge and use of them.

#### **Curriculum Questions and Appropriate Forms of Inquiry**

The attempt to identify and distinguish forms of inquiry, as well as any attempt to use them appropriately and accurately, presupposes a clear definition of the basic concept or entity to which the phrase, *forms of inquiry*, refers. A *form of inquiry* is a process designed to answer a certain class of previously unanswered questions. Any such process is comprised of a series of proven procedures for making and justifying knowledge claims or obtaining answers to such questions that are congruent with some theory of inquiry (Dewey 1938; Hamlyn 1970). A form of inquiry is often thought of, loosely, as a method of research in which established procedures are followed and from which conclusions inexorably follow. This mistaken notion overlooks the fact that procedures cannot be separated from a theory of inquiry that gives them meaning and purpose and a clear rationale (Buchler 1961). In fact, an accurate interpretation of a theory of inquiry may allow for some flexibility in procedures rather than a rigid adherence to a fixed pattern of procedures.

It has been demonstrated that a single theory of inquiry and an associated logic of procedure cannot suffice to answer all questions that may arise in formal inquiry (King and Brownell 1966). The very differences inherent in different kinds of questions require that they be addressed differently. For example, a question about what constituted the common branches of learning in the curriculum of nineteenth-century grammar schools in the United States requires obtaining data and drawing conclusions about that data in ways quite different from what is required by a question about how a particular set of teachers interprets their participation (or lack of participation) in curriculum policy making decisions at the local school district level. The first question is historical in its focus, and the canons of historical inquiry apply. The second question is phenomenological in type and requires the use of interpretive forms of inquiry. The processes designed to answer these two different kinds of questions call for different procedures, different data-gathering techniques, different methods of analysis, different logic or reasoning processes to establish justifiable knowledge claims, etc. — in short, two separate and distinct forms of formal inquiry.

Classifying and labeling various forms of inquiry is hardly a science with formal rules and procedures. Nevertheless, scholars have done some comparative analysis and systematization of various forms of inquiry (Phenix 1964a; Phenix 1964b; Schwab 1978; Tykociner 1966). The most commonly distinguished forms of inquiry, such as the scientific, the artistic, or the philosophical, are familiar enough to us, but each of these is not really as singular as might be supposed. They each represent, in actuality, several related forms of inquiry. For instance, within the empirical/theoretical sciences there are forms of inquiry ranging from the analytic-classificatory procedures of biology and zoology to the hypothetical-deductive procedures of theoretical physics and chemistry. These and other related ones are all clearly classified as scientific forms of inquiry. They may be distinguished, for instance, from artistic forms of inquiry, such as the non-discursive presentation of an aesthetic idea or feeling through music or art and the discursive presentation of human character and ideals through dramatic fiction or biography. Each of these sets of related forms of inquiry is distinguished from the other, and from all other forms of inquiry, by the type of questions they are able to address and the characteristic way they go about establishing answers to them.

Listed below are the forms of inquiry that are described in this book. Each is discussed by its respective author or authors in terms of its intended purpose, the classes of questions it is capable of addressing, the theories of inquiry it can employ, and the logic of procedure it requires to generate and substantiate the knowledge claims it yields. Certain of these forms of inquiry are the conventional disciplinary forms of inquiry. Others toward the end of the list are multidisciplinary or transdisciplinary in character, and are wellsuited to the kinds of holistic questions posed in curriculum. While some of these may be less familiar to curriculum scholars than most of the conventional disciplinary ones, they have existed (under some name) for a very long time and have been widely utilized in numerous studies in various fields of research, including education (Bredo and Feinberg 1982; Kockelmans 1979).

Analytic	Hermeneutic
Ampliative	Theoretical
Speculative	Normative
Historical	Critical
Scientific	Evaluative
Ethnographic	Integrative
Narrative	Deliberative
Aesthetic	Action
Phenomenological	

Questions that arise in the field of curriculum inquiry are answerable by using any or all of these forms of inquiry. These questions range quite widely in subject matter and focus, and thus no single form of inquiry is characteristically employed in answering them. The most common types of questions asked in curriculum inquiry, however, are those which require multidisciplinary or transdisciplinary forms of inquiry, such as the theoretical, the normative, the critical, the evaluative, the integrative, the deliberative, and the action forms of inquiry. This is the case because of the nature of curriculum activity itself, the kind of knowledge required in the course of doing curriculum activity, and the type of inquiry questions formulated to obtain this kind of knowledge.

No definitive taxonomy of research questions needing answers has been devised in the field of curriculum inquiry. However desirable such a taxonomy might appear to be to some curriculum researchers, the task would be nearly impossible to complete. New questions are always being identified that had not been thought of before, and circumstances of practice change rapidly enough that some old questions no longer seem relevant. What can be done, however, is to identify some typical questions or classes of questions that are capable of being addressed by the forms of inquiry available to us. If certain classes of questions arise that are not amenable to the forms of inquiry we have at hand, some new forms of inquiry would obviously have to be devised to deal with them.

To illustrate the categorical differences among curriculum research questions that exist in relation to the various forms of inquiry described in this book, some typical questions are given in Figure 1 for each of these seventeen forms of curriculum inquiry. By comparing and contrasting these questions, differences in the purposes and procedures of the various forms of curriculum inquiry will become apparent, and some sense of the appropriateness of a given form of inquiry for addressing certain kinds of questions may be gained.

# Figure 1 Typical Questions Dealt with by Various Forms of Inquiry

Analytical	To what does the term "curriculum" ordinarily refer?
	What concept might serve to guide curriculum practice better than "educational objectives?"
Ampliative	What assumptions and norms are implicit in the arguments presented in support of a particular educational program and how appropriate are they?
	What alternative rationales would be more appropriate and why?
Speculative	What personally synthesized knowledge and experience can I usefully convey to others about the curriculum plan- ning process (or about needed changes in school pro- grams)?
	What warning or guidance can I offer about current trends in curriculum theory (or school curriculum practice)?
Historical	What were the common factors supporting the passage in 36 state legislatures between 1983 and 1986 of increased curriculum requirements and standards for high school graduation?
	How (and in what political context) were the processes of curriculum decision-making carried out at City Center Mag- net School between 1968 and 1973?
Scientific	How many schools use the curriculum model employed in John Dewey's Laboratory School at the University of Chicago?
	Is "expanding environments" the most common scheme used in grades 1-3 social studies throughout the U.S. for organizing curriculum units?
Ethnographic	What elements constitute or influence curriculum deci- sion-making at district or state levels?
	What factors in the processes of curriculum planning im- prove or inhibit teachers' abilities to take part in curriculum development?
Narrative	What historically (autobiographically) can I reconstruct about the meaning I have ascribed to my teachers' or courses' influence on my career choice?

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	Have I changed my views as a music teacher over the last 25 years about what's important to teach in the music curric- ulum and why?
Aesthetic	How can the impact of the curriculum experienced by Mrs. Smith's class be characterized qualitatively?
	What are the salient qualities of text materials in company X's packaged reading program?
Phenomenological	What does the pupil perceive and feel about being placed half day in a separate vocational school program and half day in a comprehensive school program?
	Is the development of a new health program in District One perceived differently by a committee person who is a teacher, a curriculum coordinator, or an administrator?
Hermeneutic	What does the phrase "I hated school" really mean in a journal written by a dropout from Jefferson High?
	What does Mr. Jones, tenth-grade science teacher, mean when he says, "Curriculum evaluation in this school is like trying to shoe a horse on the freeway."
	What was meant by the term "a curriculum branch," used in late nineteenth-century curriculum literature?
Theoretical	How shall statements relating structural elements, norma- tive perspectives, and action guidelines best be formulated to convey the overall conceptual scheme posited for a spe- cific curriculum?
	Is the concept "curriculum design" a valid and efficacious one for grasping and communicating the idea of organizing all aspects of a curriculum into a workable whole (includ- ing normative, practical, and structural dimensions)?
Normative	On what premises can a curriculum be created?
	What systematic justification can be offered for a proposed curriculum?
Critical	What contradictions and inconsistencies exist between fundamental norms (e.g., equal access to knowledge, in- tellectual freedom, human dignity) and existing curricu- lum decisions and practices?

	How clear is the link between rhetoric and action regarding "no bias" (sexual, economic, ideological) in curriculum and its enactment?
Evaluative	Does the "post-holing" method of content selection in his- tory contribute to stated objectives better than the chrono- logical coverage method?
	Is curriculum enactment generally enhanced or inhibited by the use of a curriculum guide by teachers?
Integrative	Do the available empirical studies on how curriculum change occurs in schools indicate any congruence (or am- biguity) in theoretical understanding or in hypotheses for further investigation?
	Does the explanation of case studies on the use of various types of curriculum development strategies give evidence of which strategy is most effective?
Deliberative	Should we change our curriculum policies or guidelines (e.g., with respect to goals, content, curriculum organiza- tion and resource allocations)?
	What is the best course of action to accomplish the desired ends?
Action	What shall be done at this step to align our actions with the ultimate goal?
	What adjustment in the next step is necessary as a result of what happened after the last step?

By making an overall examination of the forms of inquiry and illustrative curriculum questions in Figure 1, a number of insights may be drawn regarding curriculum inquiry. First, it would appear that a wider and more varied range of questions can be asked and answered within this field of inquiry than many of us have previously realized (Kimpston and Rogers 1986; Posner 1989). The differentiation of the many different forms of inquiry makes it possible to conceive of a variety of specific questions that correspond to the function and processes of the different forms of inquiry—questions that might not otherwise have come to mind. The scope of substantive matters that even these illustrative questions encompass suggests that the domains of knowledge that are relevant to curriculum activity may be more numerous than many scholars have previously realized. While the variety of available forms of inquiry in no way defines the number or substance of these domains of curriculum knowledge, nevertheless, their availability for use in curriculum research can stimulate scholars to deal with more questions relevant to practice than could have been accommodated by a narrower range of inquiry forms and processes.

Second, those questions cited toward the end of the list—ones related to action, deliberative, integrative, evaluative, critical, normative, and theoretical inquiry—seem to be the kinds that resemble most closely those questions confronted in the day-to-day work of ordinary curriculum practice. The questions amenable to earlier forms of inquiry on the list are narrower and less easily related to the holistic problems of practice than are those associated with the complex, multidisciplinary or transdisciplinary forms of inquiry toward the end of the list. This suggests that, if the problems of curriculum practice are going to be informed by formal inquiry, the most desirable and useful kinds of inquiry to be attempted would be those involving these latter types of questions and forms of inquiry.

For example, theoretical knowledge can assist with the problem of conceiving, structuring, and expressing the constitutive elements or form of a usable curriculum; theoretical inquiry yields theoretical knowledge. Normative knowledge can assist with the problem of determining the preferred norms and values that shall govern the substance of the curriculum: normative inquiry yields normative knowledge. Critical knowledge can assist with the problem of determining discrepancies between curricular ideals and practices and what could bring them more into alignment; critical inquiry yields critical knowledge. Evaluative knowledge can assist with the problem of determining what curricular norms and practices are being appropriately or inappropriately enacted; evaluative inquiry yields evaluative knowledge. Integrative knowledge can assist with the problem of determining what is known from research or experience that is relevant to making curriculum decisions and taking curriculum actions; integrative inquiry vields integrative knowledge. Deliberative knowledge can assist with the problem of determining a course of action that integrates preferred form and substance, norms and practices, into a unified and workable plan of action; deliberative inquiry yields deliberative knowledge. Action knowledge can assist with the problem of determining how best to enact a chosen plan of action, step-by-step over time, until the state-of-affairs anticipated by the plan is ever-more-closely approximated; action inquiry yields action knowledge.

Knowledge generated by the less immediately practice-oriented forms of inquiry farther up the list can, of course, be sought when relevant as a part of the process of generating answers to the holistic questions of practice by

means of the more strictly practice-oriented forms of inquiry toward the end of the list. This insight, incidentally, implies that whenever we have relied on a single dominant form of inquiry in curriculum research, or even on a few of the rather limited forms of inquiry, we have unfortunately restricted the applicability of our work to curriculum practice. The identification of deliberative, action, critical inquiry, etc., as being the forms of inquiry closest to being able to inform practical curriculum activity should not blind us, however, to the contribution that the other forms of inquiry can make to these types of inquiry and to the body of knowledge in specific domains of inquiry that may be utilized long after it has been generated.

Third, the questions toward the end of the list should remind us that practitioners may in many cases be the most appropriate persons to conduct much of the inquiry in a practical field such as curriculum. Because they are already immersed in and familiar with actual curriculum settings, they are in an excellent position to appreciate and to articulate the need for certain kinds of practical knowledge and then to carry out appropriate inquiry to obtain that knowledge. It is also evident from those questions toward the end of the list that much of the knowledge obtainable by the more practical, interdisciplinary forms of inquiry is situation-specific. Outside researchers coming into a specific situation to do practical curriculum inquiry may find it considerably more difficult to grasp the existing research opportunities and constraints than would those who are intimately connected with that setting. It is, therefore, imperative to equip practical inquiry in one or more of its practice-oriented forms of inquiry.

Finally, it should be noted that the forms of inquiry identified in this list and described in this book are not all of the existing ones that might be utilized nor are they as finely distinguished as to type as might be possible. For instance, within scientific forms of inquiry, political inquiry or sociological inquiry or "natural history" inquiry might well have been included. Within deliberative inquiry, particular forms of inquiry might have been designated differently, as, for example, policy inquiry, development inquiry, or implementation inquiry or perhaps deliberative inquiry of the evaluative, prescriptive, or enactive types. Interpretive forms of inquiry are among the least clearly differentiated from each other. It is true that phenomenological, narrative, and hermeneutic inquiry overlap in some fashion. Researchers frequently use what they call the interpretive sociology approach, the psychoanalytic approach, symbolic interactionism, human science, linguistic analysis, the subject dialectic method, the autobiographic method, and other forms of interpretive inquiry (Polkinghorne 1983). These examples of alternative ways of classifying and labeling various forms of inquiry should warn us against believing that the seventeen forms of inquiry presented in

this book are the only ones or the preferred ones. They simply represent ones for which these writers could develop authentic statements on how to conduct particular types of curriculum inquiry as they understand them after years of experience using them.

The chapters that follow will demonstrate the basic thesis of this introduction to curriculum inquiry, its nature, questions, and forms of inquiry: that an appropriate form of curriculum inquiry must be selected to match the particular type of curriculum research question being studied. If the correct match is not made, successful inquiry will be thwarted. If an attempt is made to try to answer a particular type of curriculum research question and the form of inquiry selected is not one designed for that type of question, the most diligent application of that research procedure will not generate an adequate answer to it. On the other hand, many ill-formulated questions can be reformulated in a way that one of the available forms of inquiry can successfully address. As in any sound inquiry, time spent in properly formulating a research question and in determining what method is appropriate for addressing that question will be time well spent. Then utilizing the guidelines stipulated by the authors in this book for properly conducting inquiry of the type selected should yield the knowledge desired.

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