

The Practicality Ethic in Teacher Decision-Making

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“Despite nearly 30 years of writing by social scientists on the willingness of organizational members to change, resistance continues to be treated primarily as a practical difficulty of organizations that requires a remedy and not as a social phenomenon requiring systematic inquiry and explanation.”¹

The literature on educational change embodies a singular dichotomy. There is, on the one hand, a voluminous collection of prescriptive literature – strategies for educational innovation that purport to tell practitioners how to accomplish change in concrete school settings. On the other hand, there is a growing body of *descriptive* studies which indicate that the actual amount of change in schools falls significantly below expectations. The life histories of innovation projects are, more often than not, records of disappointment and failure. Indeed, it seems that few authors of strategies for innovation can point to solid evidence that their particular set of procedures has in fact produced fundamental changes in the regularities of schooling.²

The most common reaction to this discrepancy between promise and achievement in the change field is a redoubled search for procedural solutions. There is usually an increased expenditure of effort infused by a sense of immediacy and urgency. But the new efforts often proceed in the same nonproductive directions. Change strategists typically seize upon some dimension such as teacher attitude or competence to supposedly account for past failure. A prescription is then written for circumventing or neutralizing this newly discovered obstacle to improvement. Predictably, the redesigned strategy produces effects which seldom differ substantially from those of previous change programs. The enterprise of schooling emerges unscathed, and the search for effective change procedures begins anew. The present paper represents an attempt to break this cycle by adopting a more analytical stance all too often brushed aside in the rush to prescribe. The approach described here is based on the premise that if an effective change strategy is ever to be devised, it must be constructed on a more thorough understanding of the naturally existing mechanisms which operate in school environments. Statements of how change *should* occur are not very useful in interpreting how classroom teachers actually respond to influences which impinge upon their established habits and practices.

The present analysis is focused in particular on the decision-making processes which appear to underlie teacher reaction to change proposals. We contend that the practicality ethic is a key link in the knowledge utilization chain in schools. The essential features of this ethic can be summarized briefly as follows. In the normal course of school events teachers receive a variety of messages

intended to modify and improve their performance. If one listens carefully to the way teachers talk about these messages, it soon becomes clear that the term “practical” is used frequently and consistently to label statements about classroom practices. In the context of the present analysis, this labeling represents an evaluative process which is a central ingredient in the initial decision teachers make regarding the implementation of a proposed change in classroom procedure. Messages which are seen as practical will be incorporated, at least tentatively, into teacher plans. The study of the practicality ethic, then, is the study of perceived attributes of messages and the way in which these perceptions determine the extent to which teachers will attempt to modify classroom practices.³

The methodology that underlies the present work can be described as broadly naturalistic. The purpose was to build a conceptual framework for understanding the way practicing teachers react to change proposals. Two data sources were utilized in this model-building effort. First, anecdotal records and other descriptive material were gathered over a two-year period. This descriptive information was obtained primarily from discussions with experienced teachers who were working with student teachers, consultation with school personnel during inservice programs and workshops, and interviews with teachers enrolled in graduate courses in Education. Second, available evidence from existing studies of innovation projects was used to augment the descriptive records. The analysis of these data consisted primarily of an attempt to construct interpretive categories and hypotheses to account for events and processes embedded in the descriptive data. The emphasis throughout was on description and explanation rather than validation and prediction. The result is a preliminary and speculative account designed to map an unfamiliar terrain in order to stimulate systematic research.

Three questions are raised by this approach to teacher decision-making. One is primarily definitional: What is the practicality ethic? One is primarily environmental: What factors shape this decision-making frame of reference? And the third is analytical: Why is the ethic of practicality such a potent force in school change? Although all three questions are treated to some degree in this essay, the first issue – the nature and central components of the practicality ethic – receives the most attention.

Educational Change: The Typical and the Exceptional

Much of what is known about knowledge utilization processes in schooling derives from the literature on innovation projects. Although such information has value, there are serious limitations to the use of this literature in understanding the ethic of practicality. A brief delineation of these limitations will serve to clarify the focus of the present analysis.

Under normal circumstances, teachers are the final arbiters of classroom practice. This condition prevails for at least two reasons. First, the formal regulatory mechanisms in schools, as they affect the individual classroom, are notoriously sporadic and unsystematic. With few exceptions, teachers work in relative isolation from adult surveillance or intervention. Second, a norm of autonomy (or individualism) operating among teachers appears to have effectively minimized the impact of outside influences on the classroom. For reasons such as these Dreeben argues that although schools resemble bureaucracies, teachers are simply not subject to bureaucratic rule in the substance of their work.⁴

This environment of relative isolation and functional autonomy is disrupted fundamentally when an innovation project is initiated. In the first place, most school innovations (e.g., team teaching, open-space schools, nongraded plans) extend beyond the scope of the individual classroom and require the cooperation of groups of teachers. Second, because of the resource commitment necessary to launch such efforts, innovation projects often attract publicity. Finally, the requirement for formal evaluation which accompanies such projects increases the information flow surrounding participants' techniques and practices. However meritorious these conditions might be, they combine to increase visibility for members of a project staff. With increased visibility comes a reduction in the isolation and functional autonomy of individual teachers and an increase in external control over them. Innovation projects, in other words, generate a set of control mechanisms which are typically absent from the normal teaching environment. Such mechanisms increase teacher passivity and suspend normal teacher reactions to improvement directives. As Fullan observes, the typical innovation strategy "usually turns out to be power-coercive *from the point of view of the user.*"⁵

For present purposes, the innovation literature lacks utility precisely because change projects tend to *bypass* teacher decision-making and hence mask the operation of the practicality ethic. This characteristic of innovation projects may account for the fact that so little is known about the user of educational innovations.⁶ User reaction seems to be displaced by the conditions under which school change is traditionally studied. Failure to acknowledge teacher decision-making does not, however, neutralize its impact on change efforts. Although the mechanisms of an innovation project may cause teacher judgment to remain dormant, the ultimate fate of an innovation would seem to depend upon user decisions. This feature may explain why schools typically revert to conventional practices as the interest and intensity of the innovation project begin to decline.

Regardless of the actual consequences of teacher decisions – a matter to be explored in more detail shortly – the preceding analysis makes it clear that the innovation literature must be used with caution as a data source for investigating teacher decision-making processes in reaction to improvement messages. Of greater importance to the present effort to define the practicality ethic are teacher judgments under the normal environmental conditions of isolation and autonomy. These normal conditions of the teaching environment appear both to shape the practicality ethic and enable it to function as a key factor in the knowledge utilization process in schools.

Images of the Teacher

Innovation strategies contain some inherent assumptions about recipients of change efforts. Unfortunately these assumptions are seldom made explicit in spite of the fact that such presuppositions determine much about the way in which a change strategy will be designed. As an introduction to the practicality ethic, this section focuses briefly on three images of the teacher which are represented in the change literature: (1) the rational adopter; (2) the stone-age obstructionist; and (3) the pragmatic skeptic.⁷ Although necessarily abbreviated, this analysis clarifies further the nature of the practicality ethic and provides insight into the origins and the power of this evaluative process.

The most common image of the teacher in the innovation literature appears to be that of rational adopter. Most strategists, that is, are inclined to use highly formalized, rational models of how school change should proceed. Such models

emphasize the intellectual processes which *ought* to determine the direction and course of school change. The ideal user is one who systematically follows a set of problem-solving steps which include such activities as problem identification, data search, deliberation, implementation, and evaluation. Change strategies designed around this image tend to stress the central importance of information in stimulating and effecting educational change.

The rational adopter image certainly appears to underlie the generalized instructional improvement efforts which occur on a regular basis in school systems. University courses, guest experts, and inservice “workshops” all rely heavily upon information dissemination and deliberative mechanisms to modify classroom practice. Presumably the weight of scholarly evidence, together with an appropriately inspirational rhetoric, will compel any “reasonable and intelligent” teacher to rush out and try the latest “new idea” in education.

It is not surprising that various strategies constructed around the rational adopter image seldom demonstrate overwhelming efficacy. Teachers, as well as most other people, simply do not conform to this highly idealized model of “rational” behavior. What is perhaps more puzzling is that change strategists continue to be startled by the fact that teachers use a variety of normative and pragmatic criteria in selecting classroom procedures.

One response to the failure of the rational adopter image is to implement training programs designed to teach users how to “deliberate rationally.”⁸ Another, and probably more representative reaction, is to assume the more pessimistic image of the teacher as stone-age obstructionist. This second teacher image, characteristic of many in the instructional technology field, calls attention to the folklore which appears to permeate most teacher discussions, to the nontechnical training of the majority of teachers, and to the problems inherent in trying to change adult behavior patterns.⁹ Change strategies built on this image seek ways to neutralize or bypass the teacher as an obstacle to educational advancement. The programmed instruction movement and the various national curriculum projects of the 1960s embodied to a considerable degree this “teacher-proof” approach to instructional innovation.

One of the more fascinating outcomes to emerge from the study of classrooms is that teachers *adapt*, rather than merely adopt, innovative practices. Studies of national curriculum projects have indicated that teachers vary widely in the ways in which they use these materials in the classroom. Gallagher’s data indicate, for example, that there is no “new” biology but rather several curricula depending upon the idiosyncratic decisions teachers make in implementing the program.¹⁰ There is even evidence that teachers devise ways of compensating for the effects of programmed instruction on rate variation among students. Teachers have been found to use procedures which slow down the fast students and speed up the slow ones, thus reducing the disparity which comes from students progressing at different rates.¹¹ The teacher-proof curriculum appears, then, to be simply an elusive ideal.

Although few in number, descriptive studies suggest that teachers react to change proposals with what might best be called pragmatic skepticism. This pragmatic image of the teacher incorporates at least three interrelated dimensions. First, teachers tend to describe their work in individualistic terms which emphasize the uniqueness of each classroom and the central role of personal preference (i.e., “personality”) in the choice of teaching methods. Second, teachers consistently express a concern for immediate contingencies and consequences. As several observers have noted, teachers are considerably more

interested in and responsive to immediate student reaction rather than evidence of long-term goal accomplishment. Finally, teachers are oriented toward the concrete and the procedural rather than the abstract and the general.¹² As will be discussed shortly, these dimensions of individualism, immediacy, and concreteness are an integral part of the practicality ethic.

Classroom Ecology and Teacher Behavior

The rational adopter and the stone-age obstructionist images obviously represent nearly opposite ends of a continuum of attitudes toward teachers embodied in the change literature. But these two polar attitudes do share a common orientation toward the origins of teacher behavior, namely the kinds of people who are attracted to teaching and the type of training they receive. Personal qualities, in other words, are seen as the primary causes of the way in which teachers react to change proposals. The pragmatic skeptic viewpoint, on the other hand, emphasizes the role of ecological variables in shaping the way teachers think about and conduct their work. From the ecological perspective, teacher behavior, including reactions to change proposals, is seen as an outgrowth of efforts to meet environmental demands imposed by the distinctive ecology of the classroom. The experience of being a teacher engenders a set of adaptive responses which have utility in negotiating classroom contingencies.¹³

This ecological approach can be illustrated readily with reference to the pragmatic skeptic image itself. Teacher skepticism may well arise in part from what appears to be a common experience with innovative practices. Given the quality of most evaluative data, many procedural recommendations for the classroom simply lack ecological validity. That is, many proposed practices may fail to mesh with existing features established by the structure and flow of real environments. As several distinguished investigators have recently noted, we know so little about the work environment of teachers that it is nearly impossible to predict successfully what impact a particular change in procedure will have on teaching conditions.¹⁴ The teaching environment is certainly discontinuous with conditions in other spheres of human activity and especially with those represented in many of the "controlled" settings in which innovative practices are "tested." These factors may explain in part why it appears to be difficult to anticipate the problems teachers will encounter with innovations once they are inaugurated.¹⁵ But it is at least understandable that the culture of schooling would embody a respectable amount of skepticism toward the latest promise to "revolutionize" teaching.¹⁶

A similar argument can be made for the ecological origins of individualism, immediacy, and concreteness. These features of teachers' view of their work would appear to be natural consequences of the fact that teachers are required to manage large groups of nonvolunteer students over long periods of time and under conditions of relative isolation from colleague interaction. Recent sociological investigations have generated evidence that the structure of teaching functions as a selective mechanism in shaping classroom practices.¹⁷ The direction of this shaping appears to be very much in line with the pragmatism that Alan Tom found "unexpectedly" among teachers who volunteered to work on the implementation of new social studies curricula.¹⁸ Proposals to improve the success rate of innovation projects by training teachers either to use more rational deliberation procedures or to acquire more refined implementation skills often discount the potential impact of the larger ecology on teacher attitudes and behavior.

The ecological viewpoint acquires particular meaning in the present context in relation to the earlier point that innovation projects involve fundamental disruption of the school environment. Depending on the size of the innovation project, this disruption would clearly have a dramatic effect on teachers and may well suspend normal response mechanisms, thereby making it difficult to study teacher decision-making practices. An additional consequence may be of even greater practical importance. Innovation projects typically function as temporary systems within educational organizations.¹⁹ Such temporary systems create ecological demands of their own and can, for short periods at least, engender and sustain response patterns which are congruent with these demands. Descriptive histories of innovation projects have regularly shown, however, that as the temporary system is withdrawn – frequently because external funding has been terminated – behavior patterns return to those which prevailed before the change project was initiated.²⁰ The innovation thus gradually fades. Under these more normal conditions, in other words, conventional teacher decision-making processes can operate more decisively. Failure to acknowledge ecological effects – the interaction of environment and teacher behavior – apparently can have significant long-range implications for change strategies.

The Practicality Ethic

In the context of this rather lengthy preamble, the ethic of practicality can now be defined with greater clarity. As noted in the beginning, the practicality ethic is manifested in the common practice of teachers of labeling certain change proposals with the term “practical.” The label “practical” is a nontechnical expression of the taken-for-granted world of the practitioner.²¹ More specifically, the term is an expression of teacher perceptions of the potential consequences of attempting to implement a change proposal in the classroom. Recommendations perceived as practical are ones which a given teacher will most likely try to incorporate into classroom procedures. Those perceived as impractical have little chance of being tried unless control mechanisms, such as those which frequently accompany innovation projects, make teacher decision-making superfluous. Studies of the formation of teacher expectations further suggest that teachers are prone to make judgments rapidly, with minimal experience or evidence.²² One would anticipate, then, that teachers will judge the practical merits of a proposal very soon after exposure to it. This tendency to make rapid decisions would appear to be further evidence of ecological effects. The very unpredictability of classroom environments would foster the ability to make on-the-spot judgments based on instinct rather than prolonged deliberation.

The major question now is: What determines practicality? In other words, what attributes of a change proposal tend to elicit the perception of practicality from teachers? This question cannot be answered here with any empirical adequacy, since the issue itself has seldom been formulated in this manner. It is possible, however, to conceptualize several possible dimensions of the practicality ethic on the basis of existing evidence. Such a procedure should be especially useful in stimulating further research on what appears to be a key element in the innovation process.

The rational adopter image of the teacher carries with it the implication that a practical proposal is one which is in fact practical. That is, the weight of the evidence for a particular proposal ought to be a sufficient condition for its adoption. In spite of the prevalence of this image, it is clearly based on a simplistic

view of human behavior. A more realistic view is that decisions about practicality result from the complex interaction of several variables. In this initial attempt to conceptualize the practicality ethic, we have posited that teachers appear to use three general criteria to determine if a statement about classroom procedures qualifies as “practical.” We have designated these criteria *instrumentality*, *congruence*, and *cost*.²³ Despite some overlap, these dimensions seem to represent distinct aspects of meaning associated with the ethic of practicality. In essence, these dimensions define the “rules” for applying the term to actual change proposals. What follows is a brief outline of the central features of these three categories.

Instrumentality

To qualify minimally as practical, a proposal must contain instrumental content. Basically this means that a change proposal must describe a procedure in terms which depict classroom contingencies. Statements of principle or specifications of desired outcomes are not practical simply because they lack the necessary procedural referents. Such nonprocedural statements would seldom, therefore, have an impact on classroom practice. A striking example of this effect is contained in Sheldon’s 1864 description of his experiences with object teaching.²⁴ Sheldon exhorted teachers to learn the principles of object teaching and to use these principles to generate individual lessons. This approach, he claimed, was much preferred to the common practice of reenacting model lessons verbatim in the classroom. Such lessons, from Sheldon’s perspective, were designed to illustrate underlying principles. Teachers, on the other hand, apparently saw these as immediately useful procedures for direct classroom application. The model lessons, in other words, had more instrumental value than the principles of object teaching.

The instrumentality dimension is particularly significant for two reasons. First, teachers often complain that innovations are seldom communicated clearly. This lack of clarity appears to be directly related to the absence of procedural content. Indeed, there is evidence that only after teachers have experienced the innovation in the actual classroom setting – that is, have translated the proposal into concrete procedures – does any full sense of understanding result.²⁵ Without this degree of understanding communicated by procedural specifications, teacher judgment concerning the practicality of a change proposal is nearly impossible. It is at this stage of procedural implementation that the greater amount of difficulty is encountered in sustaining an organizational innovation. Second, converting principles and outcome specifications into appropriate procedures is a demanding task. Chesler, who has had considerable experience with innovation projects, maintains that translating “increased knowledge or new intentions . . . into behavioral implications relevant for the classroom is a highly developed skill, and most teachers do not have it.”²⁶ In this regard, Charters and Pellegrin contend, on the basis of their analysis of four innovation attempts, that the “fallacious assumption that a statement of general, abstract program values and objectives will easily be translated into new and appropriate behavior patterns” is one of the important barriers to innovation.²⁷

Congruence

Instrumentality alone, however, does not determine practicality. Teachers also make decisions in terms of the extent to which a proposed procedure is con-

gruent with perceptions of their own situations. Evidence for this congruence dimension is contained, for example, in the frequently expressed concern teachers have for the way their students will react to an innovation.²⁸ At this writing, congruence appears to comprise a cluster of elements all focusing on the perceived “match” between the change proposal and prevailing conditions. The emphasis throughout is personal. One teacher in Dienes and Connelly’s case study expressed this personal dimension of congruence in the statement: “I can’t believe that there is a machine that could be programmed in all the complexity necessary to teaching some of the concepts which I am teaching or which are being taught.”²⁹

At a minimum, there appear to be three aspects of congruence. The first relates to the proposal itself: Does the procedure fit the way the teacher normally conducts classroom activities? Practices which depart radically from normal conditions are usually viewed as impractical, often on the grounds of possible adverse student reaction. The second aspect of congruence involves perceptions of the origins of the proposal and, in many cases, the spokesman for the innovation. Teachers respond, in other words, to the nature of the setting under which the procedure was tried previously and to the experiential credentials of the person making the recommendation. A practice, for example, which is known to work in an upper-middle-class suburban high school may often be perceived as impractical by teachers in an inner-city school, especially when communicated by a university consultant. Finally, teachers appear to judge procedures in terms of their compatibility with self-image and preferred mode of relating to students. This dimension of congruence is especially evident in teacher reactions to behavior modification procedures. Although a teacher may be convinced that such procedures “work,” he or she may feel that the role of contingency manager does violence to the student-teacher relationship.

It is clear from these brief comments that congruence serves a conserving function in maintaining conventional classroom procedures. Such a conclusion is consistent, at least, with the prevailing evidence that most “changes” in school practice involve little more than a rearrangement of existing patterns and processes.³⁰ The existence of a conserving attitude among teachers is understandable in view of the fact that they bear the immediate brunt of any failure to maintain a functional school program.

Cost

The final criterion of practicality is best described by the term “cost.” In our usage, cost may be conceptualized as a ratio between amount of return and amount of investment. It refers primarily to the ease with which a procedure can be implemented and the potential return for adopting an innovation. The extent to which a proposed practice can be broken down into smaller units for short-term trials, for example, obviously reduces the cost of innovating. Since many educational innovations involve major structural reorganizations, cost is usually high. A great deal of effort must be invested to achieve an unknown amount of return.³¹ Data to support the role of the cost dimension are contained in Stephens’s study.³² He found that teachers would adopt innovations, even despite moderate personal skepticism, if the reward structure of the school was made contingent upon innovativeness. It is important to note that the notions of cost and reward used here are not solely matters of monetary remuneration. Teachers are especially responsive to social factors, such as recognition and student enthusiasm. Since costs appear to rise as an implementation program

progresses, the cost factor would seem to play an important role in the gradual decline which tends to characterize the latter stages of innovation projects.³³

Conclusion

The dimensions of instrumentality, congruence, and cost would seem to define the fundamental content of the practicality ethic. It is obviously premature to draw profound implications from this preliminary inquiry into a largely neglected feature of the innovation process. The practicality construct, together with the ecological framework from which it derives, would seem, however, to offer useful interpretive tools for understanding how teachers make decisions and, eventually, how to construct materials which will have a greater chance to change classroom practice.

Notes

¹ J. B. Giacquinta, "The Process of Organizational Change in Schools," in F. N. Kerlinger (Ed.), *Review of Research in Education*, Vol. 1 (Itasca, Ill.: F. E. Peacock, 1973).

² It is impossible to abstract here the vast quantity of writings in the educational innovation field. In addition to Giacquinta's review cited in note 1, there is a useful summary and extensive bibliography contained in E. C. Short, "Knowledge Production and Utilization in Curriculum: A Special Case of the General Phenomenon," *Review of Educational Research*, Summer 1973, 43. The standard reference works are R. Havelock's *Planning for Innovation through Dissemination and Utilization of Knowledge* (Ann Arbor: University of Michigan, 1969) and *A Guide to Innovation in Education* (Ann Arbor: University of Michigan, 1970). For descriptive studies of innovation projects and processes, see J. I. Goodlad and M. F. Klein, *Behind the Classroom Door* (Worthington, Ohio: Charles A. Jones, 1970); N. Gross, J. B. Giacquinta, and M. Bernstein, *Implementing Organizational Innovations* (New York: Basic Books, 1971); L. M. Smith and P. M. Keith, *Anatomy of Educational Innovation* (New York: Wiley, 1971); and S. B. Sarason, *The Culture of School and the Problem of Change* (Boston: Allyn and Bacon, 1971). These descriptive works are ably summarized and analyzed in M. Fullan, "Overview of the Innovative Process and the User," *Interchange*, 1972, 3(2/3). The generalizations in this essay about the innovation process are based on these and related works, although no attempt has been made to document each point in detail.

³ The concept of "perceived attributes of messages" is adapted from chapter 4 of E. M. Rogers and F. F. Shoemaker, *Communication of Innovations*, 2nd ed. (New York: Free Press, 1971). The study of practicality focuses, in other words, on what Sieber has called the "phenomenological world" of the teacher. See S. D. Sieber, "Trends in Diffusion Research: Knowledge Utilization," *Viewpoints*, May 1974, 50.

⁴ R. Dreeben, "The School as a Workplace," in R. M. W. Travers (Ed.), *Second Handbook of Research on Teaching* (Chicago: Rand McNally, 1973). On isolation and the norm of autonomy among teachers, see D. K. Clear, "Supervision in an Educational Organization," *ISR Journal*, Spring 1970, 2; D. C. Lortie, "The Teacher and Team Teaching: Suggestions for Long-Range Research," in J. T. Shaplin and H. F. Olds (Eds.), *Team Teaching* (New York: Harper and Row, 1964); and D. C. Lortie, *Schoolteacher: A Sociological Study* (Chicago: University of Chicago Press, 1975).

⁵ Fullan (note 2), p.4.

⁶ Fullan places special emphasis on the need to study the user's perspective in change research. Sieber (note 3), p.66, maintains that existing innovation research "fails to penetrate the mental world of the practitioner in order to reflect definition of

needs, problem-solving patterns, knowledge translation strategies, *criteria for appraisal of options*, perceptions of experts and other outsiders, and the like" (emphasis added).

⁷ This treatment of teacher images parallels in several respects the approach of S. D. Sieber, "Images of the Practitioner and Strategies of Educational Change," *Sociology of Education*, Fall 1972, **45**, especially in the development of the rational adopter model. For an excellent analysis of how the "norm of rationality" functions in organizations, see J. D. Thompson, *Organizations in Action* (New York: McGraw-Hill, 1967).

⁸ Connelly, for example, recommends precisely this type of training to prepare teachers to use rational processes in curriculum deliberation. See F. M. Connelly, "The Functions of Curriculum Development," *Interchange*, 1972, **3**(2/3).

⁹ Glass, in particular, uses pre-history imagery to depict the schoolman's mentality. See G. V. Glass, "Educational Knowledge Use," *The Educational Forum*, November 1971, **36**.

¹⁰ J. J. Gallagher, "Three Studies of the Classroom," in J. J. Gallagher, G. A. Nuthall, and B. Rosenshine, *Classroom Observation*, AERA Monograph Series on Curriculum Evaluation, no. 6 (Chicago: Rand McNally, 1970). See also the review of research on BSCS in Connelly (note 8), pp.163-164.

¹¹ R. O. Carlson, *Adoption of Educational Innovations* (Eugene, Ore.: Center for the Advanced Study of Educational Administration, University of Oregon, 1965).

¹² This pragmatic skepticism image of the teacher is based on several data sources. For an analysis of "personal pragmatism" among teachers, see Lortie, *School-teacher* (note 4). Tom found that teachers used pragmatic criteria, concrete rather than abstract thinking, and estimates of student responsiveness to judge proposed innovations; see Alan Tom, "Teacher Reaction to a Systematic Approach to Curriculum Implementation," *Curriculum Theory Network*, Spring 1973, No. 11. Jackson has documented the general focus on immediate student reaction among experienced teachers; see P. W. Jackson and E. Belford, "Educational Objectives and the Joys of Teaching," *School Review*, Autumn 1965, **73**. Lortie has argued that student reactions in the classroom constitute the major component of the reward system in elementary teaching; see D. C. Lortie, "The Balance of Control and Autonomy in Elementary School Teaching," in A. Etzioni (Ed.), *The Semi-Professions and Their Organization* (New York: Free Press, 1969).

¹³ The classroom ecology model is discussed more thoroughly in W. Doyle and G. A. Ponder, "Classroom Ecology: Some Concerns about a Neglected Dimension of Research on Teaching," *Contemporary Education*, Spring 1975, **46**; and W. Doyle, "Paradigms in Teacher Effectiveness Research," paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., 1975.

¹⁴ Dreeben (note 4); J. Walton, "The Study of Education: Prisoner of Metaphor and Synecdoche," *Educational Studies*, Fall 1974, **5**; and J. J. Schwab, *The Practical: A Language for Curriculum* (Washington, D.C.: National Education Association Center for the Study of Instruction, 1970).

¹⁵ For an analysis of barriers to change which emerge after an innovation has been installed, see Gross, Giacquinta, and Bernstein (note 2).

¹⁶ An excellent example of teacher skepticism toward innovations can be found in Forrest Parkay, "Innovation in a Chicago Inner-City High School," *Phi Delta Kappan*, February 1976, **57**.

¹⁷ The selective effects of schooling experience are documented especially well in H. L. Gracey, *Curriculum or Craftsmanship: Elementary School Teachers in a Bureaucratic System* (Chicago: University of Chicago Press, 1972). The argument phrased in reinforcement principles is advanced by E. J. Haller, "Pupil Influence in Teacher Socialization: A Socio-Linguistic Study," *Sociology of Education*, Fall 1967,

40. More general treatments are available in Dreeben (note 4); and D. C. Lortie, "Structure and Teacher Performance: A Prologue to Systematic Research," in *How Teachers Make a Difference* (Washington, D.C.: U.S. Office of Education, U.S. Government Printing Office, 1971).

¹⁸ Tom (note 12).

¹⁹ The concept of "temporary system" is expounded in M. B. Miles, "On Temporary Systems," in M. B. Miles (Ed.), *Innovation in Education* (New York: Bureau of Publications, Teachers College, Columbia University, 1964).

²⁰ This tendency to revert to previously dominant behavior patterns once a change strategy has been terminated is especially apparent in A. M. Brenner, "Self-Directed T. Groups for Elementary Teachers: Impetus for Innovation," *Journal of Applied Behavioral Science*, May-June 1971, 7. See also Gross, Giacquinta, and Bernstein (note 2); and Smith and Keith (note 2).

²¹ The conceptual significance of the "taken-for-granted world" of the practitioner is delineated in A. Schutz, *Collected Papers*, Vol. 1 (The Hague: Martinus Nijhoff, 1962), especially pp.7-31 on commonsense thinking and pp.67-96 on action and practicability; and H. Garfinkel, "Remarks on Ethnomethodology," in J. J. Gumperz and D. Hymes (Eds.), *Directions in Sociolinguistics: The Ethnography of Communication* (New York: Holt, Rinehart and Winston, 1972). The labeling process manifested in teacher use of the term "practical" would seem to be an instance of a more general phenomenon which Cicourel and his associates have called "ad hocing." See A. V. Cicourel and J. I. Kitsuse, *The Educational Decision-Makers* (Indianapolis: Bobbs-Merrill, 1963); and K. C. W. Leiter, "Ad Hocing in the Schools: A Study of Placement Practices in the Kindergartens of Two Schools," in A. V. Cicourel (Ed.) et al., *Language Use and School Performance* (New York: Academic Press, 1974). Ad hocing is in essence a process of coining nontechnical terms, such as "babyish," to describe features teachers consider important to the conduct of their work. Ad hocing would even seem to be present in the use of such terms as "motivation" and "readiness," which for teachers appear to carry little of the technical substance reflected in the literature of psychology. See P. W. Jackson, *Life in Classrooms* (New York: Holt, Rinehart and Winston, 1968). The nontechnical terms in teacher language appear to be especially useful in capturing teachers' tacit understandings of variables which operate in classroom environments. The more technical language of psychology, developed to describe more controlled laboratory settings, is frequently inadequate to communicate the reality teachers encounter in the classroom.

²²Evidence for this tendency among teachers to make judgments early is reviewed extensively in J. E. Brophy and T. L. Good, *Teacher-Student Relationships: Causes and Consequences* (New York: Holt, Rinehart and Winston, 1974).

²³ For alternate lists of innovation characteristics, some of which parallel the dimensions employed in this essay, see Rogers and Shoemaker (note 3); M. B. Miles, "Innovation in Education: Some Generalizations," in M. B. Miles (Ed.), *Innovation in Education* (New York: Bureau of Publications, Teachers College, Columbia University, 1964); and especially G. Zaltman, R. Duncan, and J. Holbek, *Innovations and Organizations* (New York: Wiley, 1973).

²⁴ E. A. Sheldon, "Object Teaching," in *Proceedings and Lectures of the National Teachers' Association, Fourth Annual Meeting*, Chicago, 1864 (Hartford: American Journal of Education, 1964). A similar and more contemporary example of teachers' reenacting procedural models in the classroom is contained in R. C. Bigelow, "Changing Classroom Interaction through Organization Development," in R. A. Schmuck and M. B. Miles (Eds.), *Organization Development in Schools* (Palo Alto, Calif.: National Press Books, 1971). Bigelow reports that teachers began to use some of the "sensitivity" exercises from the organization development intervention, even though classroom interaction was not a direct target of the intervention strategy.

²⁵ This problem of communicating the meaning of innovations is documented in Connelly (note 8); Tom (note 12); Gross, Giacquinta, and Bernstein (note 2); and Smith and Keith (note 2).

²⁶ M. A. Chesler, "Teacher Training Designs for Improving Instruction in Interracial Classrooms," *Journal of Applied Behavioral Science*, September-October 1971, 7, 620.

²⁷ W. W. Charters, Jr., and R. J. Pellegrin, "Barriers to the Innovation Process: Four Case Studies of Differentiated Staffing," *Educational Administration Quarterly*, Winter 1973, 9, 12.

²⁸ See references cited in note 12.

²⁹ B. Dienes and F. M. Connelly, "A Case Study of Teacher Choice and Deliberation," paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, 1973, p.5.

³⁰ D. Orlosky and B. O. Smith, "Educational Change: Its Origins and Characteristics," *Phi Delta Kappan*, March 1972, 53. The congruence dimension is compatible with the evidence on the significance of personal contacts as a source of innovation information. See E. R. House, *The Politics of Educational Innovation* (Berkeley, Calif.: McCutchan, 1974).

³¹ On the effects of "divisibility" as a characteristic of innovations, see Zaltman, Duncan, and Holbek (note 23). The theme of cost is prominent in House (note 30), especially as it relates to the fact that innovations tend to make existing skills obsolete and hence require major retraining efforts. On the relation of costs and incentives in educational innovation, see J. Pincus, "Incentives for Innovation in the Public Schools," *Review of Educational Research*, Winter 1974, 44.

³² T. Stephens, "Innovative Teaching Practices: Their Relation to System Norms and Rewards," *Educational Administration Quarterly*, Winter 1974, 10. House (note 30) notes that there are, under normal circumstances, few rewards for teachers which match the costs extracted by changing teaching practices.

³³ The notion of rising costs is based on the finding in Gross, Giacquinta, and Bernstein (note 2) that unanticipated difficulties for teachers emerged only after the innovation had been installed.