

Changing Our Ideas about Change

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Current approaches to school reform stress tighter coupling of system plans and teacher behaviour, but ignore dilemmas inherent in teaching which may place limits on efforts to manage teacher behaviour. Starting from the teacher's perspective might be a more promising way to do research and make policies aimed at improving schooling. The notion of dilemma is lodged within a conception of school reform which takes the perspective of the teacher seriously. Rather than reform through management; the argument here is for reform through greater teacher awareness of dilemmas-in-practice and how they resolve them. The consequences of these resolutions become the agenda for reform.

Les tendances actuelles de la réforme scolaire soulignent la nécessité d'un rapprochement plus serré entre les plans de systèmes et le comportement des enseignants mais ignorent les problèmes inhérents à l'enseignement, qui pourraient limiter les efforts faits pour contrôler le comportement des enseignants. Il serait peut-être plus utile à la recherche et à l'établissement de politiques visant à améliorer le système scolaire, de commencer par étudier le point de vue de l'enseignant. L'idée de dilemme a sa place dans une conception de la réforme scolaire qui s'intéresse sérieusement au point de vue de l'enseignant. Ceci vaut mieux que la réforme par l'administration; On propose la réforme en informant mieux les enseignants des dilemmes qui se trouvent dans la pratique de l'enseignement et comment les résoudre. Les conséquences de ces résolutions établissent les bases des réformes.

CURRENT CONCEPTIONS OF CHANGE

One of the important consequences of the curriculum movement of the past 20 years is that school systems have been subjected to endless reform efforts. In the wake of the innovations came innovation watchers: sociologists, psychologists and curricularists trying to discover more about schools in the process of change and thereby learning more about the status quo – the stable systems which form part of any complex organization. We are only beginning to realize just how complicated the status quo is. Lortie (1973) has a useful word for its complexity. He says that well-established patterns have gathered "moss." The moss he refers to is the interconnecting link that one system in a school has with other systems. The existence of such moss is fundamentally important to understanding teacher reactions to proposals to change their practice.

In short, as part of the process of school improvement we must consider the views of teachers seriously; this consideration is the chief purpose of this paper.

In short, the current dominant conceptions of school change do not give proper attention to the role that teachers ought to play in school reform. In fact the teacher tends to be reduced to an element to be manipulated within a framework of social and/or environmental control. As a consequence the important moral agency of the teacher is reduced to an instrument.

Two approaches to change now dominate theory and practice; these I call a *systems* and an *ecological* approach. Pointing out the limitations in these approaches I go on to urge another, called *reflexive*, which, by retaining the moral agency of the teacher in the process of change and by being sensitive to the practical dilemmas of teaching faced by teachers, avoids important limitations in the first two approaches. I begin by looking at the systems and ecological approaches.

The systems conception might also be called the bureaucratic. The idea behind this conception is that inputs (decisions) and outputs (what happens in the classroom) can be tightly coupled (Weick, 1976). The parts of the system are arranged to ensure that central directives will be implemented – people will act according to system plans and if they don't the nature of the system will be adjusted to improve the link between input and outputs. It is assumed that those in the system find the goals understandable and that the technical capacity exists to implement those goals (see Table 1).

Now much of the literature on school change reflects a systems approach. (See, for example, Fullan, 1982, for a review of this literature.) How teachers behave in relation to systems plans is taken to be the basis for describing their behaviour. One approach, for example, involves diagnosing the concerns of teachers in relation to use of innovation along a continuum which moves towards "effective" use of the innovation; this is called the Level of Use (LoU) instrument (Hall & Loucks, 1977). Teachers are measured on a scale of "usingness" in order to determine how well the "treatment has been implemented," that is, the extent to which the innovation has been translated into teacher behaviour defined by the design of the innovation. The aim in gathering this data is to measure implementation in a "cost-feasible manner." The LoU instrument is a scale against which people's responses to systems plans can be measured. As the authors say, "The focus is not on how they feel (think) but on what they do in relation to the innovation." That is on the extent to which they behave in conformity with the desired behaviour.

TABLE 1
Different Approaches to Innovation Activity

	<i>Basis of Teacher Behaviour</i>	<i>Role of Research</i>	<i>Innovation Activity</i>
Systems	Compliance with policy directives	Find ways of engineering compliance	Disseminate policy directives – couple elements of system
Ecological	Controlled by nature of context	Discover causal relations between context and behaviour	Alter nature of context
Reflexive	Intentions of teacher	Discover what teacher intentions really are. Compare intention to practice	Engage teachers in critical analysis of practice

In this conception, practice itself is seen to require scientific control. The LoU instrument brings scientific precision to bear on the problems of managing change; assessments of teachers are used to help people accommodate to the plans of the organization. Defining teacher behaviour in terms of system norms can be seen in the typology of teacher response to change developed by Doyle and Ponder (1977). They have developed a typology based on how different theories of organizations conceptualize the behaviour of individuals as they react to change proposals. Their first type, the rational adopter, is a familiar stereotype. The individual is persuaded by "information dissemination and deliberative mechanisms." The second type, the stone-age obstructionist, tends not to react to change proposals, but to continue ever onwards with the primitive technology. This type of person must be either ordered to do the new thing or bypassed by teacher-proofed materials. The third type – or image – is that of the pragmatic sceptic. Most teachers, Doyle and Ponder say, are of this type. The pragmatic sceptic is bounded by what works, tending to look upon change proposals either as similar to what they now do or as somehow impractical. Teachers, on this view, are relatively immune to new ideas. It is not they who are inventive but the

outsiders whose “practicality” teachers suspect. This is not an uncommon view and on the face of it seems valid. The problem is that the teacher is still seen as somehow deficient in relation to a more rational “go ahead” system which renders what teachers do less than rational – merely practical. My problem with this view of teachers that renders them less rational and scientific than the system is that there is no apparent reason why the system should be taken as rational and the teacher not. Perhaps innovators in the system have good ideas; perhaps teachers do. The matter cannot be settled by simply assuming that the system’s plans make more sense than those of teachers.

Change proposals after all are shifts in orientation, new sets of unclear meanings whose implications take time to emerge. Why assume, as many systems-oriented people do, that failure to adopt successfully an innovation is due to lack of adequate knowledge for making it work? This assumes that innovators and teachers construe school practice in the same way. By typifying teachers’ reactions to innovation as lack of awareness of or resistance to change, systems change proponents tend to ignore the fact that teachers operate well-functioning routines which for them may solve many difficult problems; to assume as well that an innovative plan is a *fait accompli* is to fail to appreciate the slow process of practically working out the implications of new visions of schooling. The systems approach underestimates the problems inherent in this process and overestimates the system’s capacities to convey unambiguous messages down the line. Perhaps the major problem is that the systems approach tends to ignore why present practices exist. This tendency stems from the concern in the system to link tightly the parts of the system together so that inputs might more closely control outputs.

The other dominant conception of change – the ecological – takes a more sensitive view of teaching conditions and of how their situation determines what they do. Underlying this conception is the idea that, if one properly appreciates the complex social/technical situation of the teacher’s practice, one will be in a position to make good policies for change. The fullest expression of this view can be found in Lortie’s classic *Schoolteacher* (1975),² in Dreeben’s *The Nature of Teaching* (1970), and in the work of others influenced by them. This conception starts from the idea that the teachers’ work world is special. As Lortie says, teachers work in special conditions; there is a low degree of volunteerism in the teacher-student relationship; there are difficulties in extracting work from immature workers; and teacher endeavours are often in a group context. Dreeben, in his analysis of the technical priorities of the teachers’ work, stresses the social dimensions of that work and the special problems

faced when dealing with large numbers of children. As he says: "The most obvious characteristic of schools is their division into isolated classrooms each containing aggregates of pupils under the direction of one teacher. This fact itself determines much of what happens in the classroom" (p. 51).

Both Dreeben and Lortie make much of the isolation of the teacher as a barrier to change, because the performances of the teacher are not subjected to critical appraisal. In the ecological program for change, environmental factors which constrain teachers should be altered so that teachers can achieve their potential.

These special ecological factors can be used to explain why the status quo persists and why teachers are unaware of the problems inherent in their work. Lortie's (1975) program for research suggests: "We must find out as much as we can about the relationship between the working conditions stressed and outcomes in the classroom" (p. 235). Factors like class size and its effect on teacher performance and learning outcomes are research topics of interest within this conception. If important factors in the teaching environment could be discovered they could be used to help teachers take account of such factors in their teaching.

Innovation activity undertaken within this conception is not intended to link teacher activity more closely to the plans of the system; it is intended to help teachers develop an improved technology based on objective research findings and so liberate their practice. It is the nature of the situation that dominates in this conceptions not the plans of the bureaucracy. So, for example, Dreeben cites innovations in team teaching to show how teachers might cope with the isolation they experience and its detrimental effect on their craft. The isolation prevents them from subjecting their practice to critical scrutiny. Change the conditions of work and teacher behaviour will improve.

While stressing the impact of the environment on teacher behaviour, Lortie also urges teachers to become more intellectually independent. He says that the ethos of the occupation is tilted against pedagogical inquiry, and he locates this tendency in his view of the nature of teacher thinking which he says has these characteristics: reflexive conservatism (which denies the significance of technical knowledge), individualism (which leads to a distrust of the concept of shared knowledge and thinks of teaching as an expression of individual personality), and presentism (which trades making current sacrifice for later gain). In Lortie's description of teacher thinking we can see that he has used categories of analysis to characterize teachers' thinking which are based on what teachers said they were doing, and these categories are much influenced by his analysis

of the ecology within which they work. It is important to remember that what teachers say they do does not necessarily reflect what they do. It may be the case, indeed I think it is, that what inheres in their practice is much more complex and sophisticated than Lortie's analysis might suggest. To find out more about teacher practice and its rationale, the researcher would have to talk to teachers and watch their teachings, and do this for some considerable time. Ecologists have tended not to do this and have, I think, underestimated the technical capacity of teachers by assessing practice against idealizations of practice rather than probing the practical knowledge built into what they know how to do.

As well, the systems and ecological views see teachers controlled by external forces – in the first case, by plans of the system, and, in the second, by environmental factors which shape behaviour. Neither considers the way teachers make sense of their working environment as they act upon it. If we think of teachers as moral agents in the educational process, we cannot both look to them for moral agency as they do their work and at the same time seek to change the way they do that work as if they were not moral agents. This seems to me to be a basic flaw in the approach to innovation that flows from systems and ecological perspectives.

CHANGING OUR IDEAS ABOUT CHANGE

There is another way of looking at change which I call the reflexive conception. This view assumes that teachers do act rationally, do tend generally to solve effectively problems that confront them, but are not always conscious of how they do these things. Change, on this view, would occur as teachers became more aware of how they solve problems and at what cost as they begin to subject their practice to critical scrutiny. Fundamental to this conception is the idea that what teachers do is reasonable, that it reflects a reasonable and considered accommodation to the circumstances in which teachers find themselves. Their behaviour thus reflects how they accommodate conflicting demands and resolve *dilemmas* inherent in their work. This is the central point. These dilemmas are manifold and complex, and their resolution is sophisticated. What teachers do cannot be explained adequately by looking for causes in their environment nor at the plans of the system. Teachers themselves make plans based on their assessments of their working environment and the problems it poses.

Research based on this conception of change would seek to describe the

nature of teacher thinking – the nature of the structure of their thought as it is brought to bear in practice. Methods which ask teachers to reflect on their practice are important – for example, stimulated recall (Argyris & Schon, 1974), and Rep Grid Analysis (Olson, 1981). This kind of research reveals a complex system of teacher thought well adapted to cope with the demands of the job as teachers see them. Teachers do have extensive technical knowledge to cope with the social and intellectual problems that face them.

Now finding out what teachers believe does not mean trying to apply cognitive psychology or information processing theory, that is to seek *endogenous* mechanisms to account for action. Doing that is the same as trying to locate sources of their behaviour in the environment. As Fenstermacher (1978) notes: "In cognitive psychology and in information processing theory, the thoughts and feelings of persons are used as clues to understanding developmental and information processing structures" (p. 180). This is not what is to be sought in research into teachers' thinking if we are concerned about the intentions of teachers. Rather than a search for mechanisms, the understanding of behaviour is lodged with what the teachers are trying to do with their plans and intentions, in their ordinary language accounts of practice, and in accounts rendered by observers.

Innovation activity associated with this perspective would involve asking teachers to consider the nature of their practice in relation to their own purposes and in relation to research findings which might illuminate problems in practice. These activities would allow teachers to test their beliefs against research findings and to test what they say they would like to do with what they seem to be doing. Encouraging reflection on practice is central to the reflexive conception because the potential for productive change comes from an increased awareness of the practitioner's own practice.

Innovation activity in this frame involves two strands. First, there is the strand that involves helping teachers understand their own thinking. The work of Schon (1983) with groups of professionals, for example, is aimed at improving professional practice by asking professionals to analyse their beliefs on the basis of stimulated recall protocols. I believe this work would be useful in in-service teacher education (see also Oberg, 1980). The second strand concerns the role curriculum materials play in promoting teacher awareness of their own thinking. I have argued that such projects have the unintended but beneficial effect of making teachers reflect upon their practice in a critical way (Olson, 1980). Thus while curriculum materials may have been set up to accomplish certain learning outcomes, working with the materials also affects the thinking of teachers; we should study those effects as well as student achievements.

An example of a reflective process in the context of curriculum materials development can be seen in the history of the Humanities Curriculum Project (HCP). As MacDonald and Walker (1976) note:

HCP took the unusual step of spelling out quite explicitly a radical alternative to which established practice was quite irrelevant. ... It intuitively generated a prospect powerful enough to persuade teachers to depart from their secure territorial niches in order to explore its possibilities (p. 83).

The project created conditions suitable for reconsidering practice; teachers were asked to reflect on their authority in the classroom, to reconsider their traditional position of dominance. Rather than instruments within the plan, teachers became critics of it and of themselves.

To summarize briefly, I see in the systems conception of change a coupling of elements of the system to achieve input-output correspondence; in the ecological, a reconstructing of the working environment to free teachers, and, in the reflexive, the development of critical awareness.

THE CONTEXT OF REFLECTIVE ACTIVITY

In what terms might the development of critical awareness be pursued? Teachers, we know, seek to align the means at their disposal to achieve the goals sought. Not always will teachers do what the system expects them to do, nor will they always be doing what they might say to a casual observer they are. Nonetheless, they do what is directed to solving problems viewed as salient. As Lortie (1975) has rightly pointed out, their work is full of endemic uncertainties; the work of Wilson (1962), a British sociologist, on the role of the teacher also makes it clear that the job demands much of teachers because of its diffuse nature.

As a consequence of the endemic uncertainties of the teacher's work I believe that the work of the teacher might well be described in terms of *dilemmas*, and it is of considerable interest to find out what these dilemmas are. If we understood what they were, we would much better be able to advise teachers, and I see advice-giving as important to innovation activity. The dilemmas we need to know about are those that teachers experience (Olson 1982). I have in mind a "phenomenological" perspective here. My interest is not so much in reconstructing the apparent inconsistencies in teachers' work into conflict of philosophical commitment, as Berlak and Berlak (1975) did in their study of open education in the U.K., but in understanding how *teachers* construe the work they do and how these constructions might be understood.

One feature of the teacher's work situation perhaps worth considering in order to understand the nature of teacher dilemmas is the *diffuseness* that they experience and worry about in their work. In assessing the teacher's role, Wilson notes that the role obligation of teaching is diffuse and difficult to delimit, and the activities of the role are highly diverse. Without having to accept that all a teacher does is carry out a role, Wilson's analysis of the consequences of role diffuseness provides a useful basis for understanding how teachers construe their practice.

Wilson notes that one of the consequences of role diffuseness is conflict and uncertainty. Wilson lists six types of uncertainty that occur as a result of diffuseness. While finding these types of uncertainties useful, I prefer to think of them as *sources* of dilemmas which, if uncontrolled, *might* lead to uncertainty, confusion, and anxiety, but which are *controlled by teachers so as not to lead in that direction*. In other words, I see teachers faced with a number of different types of dilemma. Since they have to continue to function and to cope with uncertainty, I see teachers as construing their practice so as to minimize the consequence of role diffuseness by intentionally *resolving dilemmas in favour of processes which most delimit the work*.

I think there is empirical support for Wilson's conceptual perspective. In talking to the teachers in the U.K. who were using an innovative science project produced by the Schools Council, I was able to isolate the kinds of dilemmas that Wilson has identified (Olson, 1980). These dilemmas reflect the ambiguities of the teacher's work which are brought to consciousness within context of innovation. I will discuss these dilemmas here briefly and refer the reader to a more extensive discussion of them elsewhere (Olson, 1982).

First, I found that teachers faced a dilemma associated with the loss of influence they experienced when they tried the inquiry approach to science teaching which the project favoured. Teachers were urged to enter a partnership with their students as they discussed science topics, but most of the teachers did not know how to construe a discussion and they searched for familiar constructs to deal with discussion-based investigations. What emerged in practice were none-too-successful "hybrids" between what had been intended and what was familiar. These hybrids, I believe, were forms of adaptive response to proposals which altered authority relationships in the classroom. The inquiry-oriented teaching, when it occurred, undermined the social dimensions of influence. The dilemma teachers faced was that they had to abandon the intellectual potentials of discussion (a major goal of the project) to maintain their influence in the classroom, an influence bound up in their being able to direct and edit effectively what happens in the classrooms.

The second dilemma concerned the absence of a clear line of demarcation whereby a teacher knows when the job the position demands has been done. Evidence of having done the job in teaching is not clear cut even at the best of times. In the case of the teachers I talked to, and for some of their students, evidence of progress came from construing the accumulation of notebooks as "making progress." Information accumulated in notebooks was seen as fulfilling a contract; yet teachers and some students said that work in the project meant they filled fewer notebooks and all were concerned that the notebooks they did have gave no guarantee of examination success.

Beyond that, since it was not clear what the syllabus for the course was, considerable problems for the teachers emerged. The syllabus did not exist because the project stressed thinking skills – but teachers could not plan their work on the basis of teaching only skills. The dilemma here is that the more the teachers stressed how to think scientifically, the less they had to show for it. How do you point to progress in thinking in some material way? Should they persist with this feature of the project or not? The horns of the dilemma are clear.

Third, the innovation I studied had a commitment to general education through the use of an integrated approach to teaching, and the teachers were faced with the prospect of teaching subject matter not familiar to them. Should they risk that or restructure the course along familiar lines? Again the dilemma is clear.

Fourth, schools doing the project were subjected to complaints from parents who thought that its integrated design was not suitable to career objectives, from employers who did not understand what it was, and from universities which did not think integrated science rated as highly as the separate sciences. Headmasters in their various ways began to withdraw institutional support for the project. Teachers in the program were then faced with the problem of dealing with the dissatisfaction of their higher-ups. How should they view these complaints? Were they reflections on them or on the system? Should they stand up for the project in spite of the complaints or should they go along with the headmaster and see the project terminated? Either way there are unpleasant consequences.

Finally, all the project teachers were accused of not preparing acceptable candidates for advanced level science. It was said to them that they had not introduced their students to the "language" of the specialized disciplines, and chemists construed their fellow chemists as not doing a proper job. As well, in one school, competition for able pupils was strong and those in the Science Department who did not teach the project were left with the less able students and exam results deteriorated. These

teachers construed this as “not getting their share of the resources” that the Science Department had available. Should they persist in using an innovative yet apparently elitist but inefficient course, or should they re-establish smooth relations with their Science Department peers? What price change? Those teachers who did the project gained or hoped to gain status and resources, unfortunately, as it turned out, at the expense of their colleagues. Should they recognize the concerns of their colleagues or re-affirm their commitment to the project in spite of these unfavourable consequences?

THE ROLE OF DILEMMAS IN THE REFLEXIVE CONCEPTION

The point is that teachers must resolve these kinds of dilemmas and these teachers did so knowing that a certain balance of costs and rewards had to be maintained. As teachers become aware of the nature of these costs and rewards they can subject their practice to critical scrutiny. They can ask themselves about the impact of the way they resolve these dilemmas on their achievement of important goals in science education. In the case I have been discussing, it became clear that the dilemmas associated with the project were resolved at the expense of certain desirable goals. Problem solving and critical thinking are important goals of the project. The teachers came to see that they had abandoned these in favour of more familiar goals and methods. How did this come about? Why did they do this?

We can imagine that the lack of a clearly defined syllabus would create significant problems for teachers in the classroom. The project had no such syllabus, only theoretical discussions of problem solving and critical thinking; yet these teachers had to prepare pupils to pass internal and external examinations. One can find in schools elaborate techniques for accomplishing this end based on the subject expertise of the teacher; clear and stable examination requirements; examination questions requiring recall; access to old examination questions; time to revise; completed student notebooks containing the material to be placed into memory; recitation; and, most importantly, trust on the part of students that what has been taught is factually accurate and relevant to what might be asked on the examination. These teachers possessed expertise in operating this pedagogical system; their expertise in this respect contributed to student confidence in their teaching. Teachers often expressed to me their pride in their ability to operate the system; the achievements that come from it bring a definite sense of accomplishment in their view.

The syllabus establishes reasonable expectations for the teacher,

indicating what is reliable information, and acting as the standard which guarantees the currency of teaching. Making sure pupils cover the syllabus is a limited goal that teachers can deal with; they do this in terms of content and can officially gloss the aims as they wish.

What was striking in the comments of these teachers was their concern about the lack of a basis for assessing the progress of students. Students expect to have a basis upon which to revise; teachers look for some tangible measure of progress through the work. The dilemma here is that the teachers were expected by the project to develop problem-solving skills, based on considerable classroom discussion of experimental results and of social issues related to science. Progress towards the goals of the program would be measured in student ability to engage in problem solving itself. Now teachers had not only to promote such intellectual goals but also to ensure that their pupils were well prepared for their examinations; they had to convince these students that they could rely on the teacher, and they had to have some way to measure their progress through the course. So, at the risk of minimizing the practice at problem solving, the teachers chose to resolve their dilemma by reconstructing the course to isolate a syllabus and to teach the course as if it were little different from the other examination courses usually taught. That meant stressing recall of information, not problem solving and critical thinking.

The project, as planned, was radically different from courses they were used to, and yet the problems they faced in *teaching* had not themselves changed. It is not surprising that teachers reconstructed the course to suit existing and well-adapted methods. Now to an outsider what the teachers did appears unreasonable—a clear violation of the doctrine of the project. If we take the time to explore their dilemmas we find that what they did was quite reasonable. The project raised questions neither it nor the teachers were able to answer.

The moral is that more reform might have been accomplished had the energy given to promoting the project doctrine gone into exploring with teachers their views about the functions of the syllabus system and the difficulties of running discussions, and explaining why teachers' resolutions tended not to be in students' best interests nor in their own interests. As it was, the dominant motif was one of frustration.

This same moral shows up in analysis of recent case study data, collected as part of a major study of Science Education in Canada, suggesting that the syllabus of content is an important component in how teachers think about their work (Olson, 1983). It is clear that teaching science with and without guidelines provide very different contexts for the teacher. Government guidelines supply teachers with a regulating mechanism – the presenting of the material of those guidelines to

students. The sheer amount of material, however, creates a situation where certain, often optional, activities must be reconsidered given the time required and their tenuous connection to what the guidelines require. Optional material is often abandoned. Given a budget of limited time and an extensive program of material to cover, the use of time is a critical factor for the teacher in deciding how to proceed. Time becomes a factor influencing not only *what* is presented, but *how* the material is presented. With guidelines authoritatively mandating content to be covered, the teacher is left with the task of deciding how that content might best be dealt with and covering the material in ways that are interesting yet not time-consuming. The juggling act continues as teachers try to resolve persistent dilemmas.

One efficient way to avoid wasting time and yet portray science in an attractive way is to retain firm control over the lesson and not to spend too much time on discussion or "side-trips." This has meant that what might have been usefully included, if time had not been of paramount importance, has had to be omitted. Such dilemmas are a common element in teachers' comments about teaching science in Canada. It is clear that teachers are faced with diverse and difficult tasks to accomplish that they and others urgently need to reflect upon as a central part of school reform.

CONCLUSION: THE THOUGHTFUL PRACTITIONER

Although I will not expand on the idea of school reform through increasing teacher consciousness of their working dilemmas, I think this is one approach to change that ought to be given more prominence than it has. If teachers can call upon the intellectual resources needed to do the job they have been given and if people help them use those resources, then they may be well placed to improve school practice to a degree not yet seen, being in a position to diagnose effectively problems which lie at the heart of their efforts to reform practice. Clearly teachers cannot do all of this by themselves. Outsiders can work with teachers to identify and analyse dilemmas, evaluating the consequences of their resolution, and working out ways to deal with the many dilemmas that exist in teaching.

The focus on dilemmas suggested here as part of a reflexive conception of change is a useful basis for understanding how we might represent the work of the teacher and thus how we might plan for change. This co-operative focus on meaning benefits the teacher because, given a greater awareness of their own construct system, teachers can begin to exercise autonomy over their work based on a better understanding of what that work is about. Where they go from there will depend, of course,

on what risks they are prepared to take for the sake of their students' education.

NOTES

¹ An earlier version of this paper was given to the OTG Onderwijsvernieuwingen at Tilburg University, Netherlands, March, 1983.

² For another critique of Lortie see also M. Buchman, *Conceptual-analytic project*.

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Gegenwärtige Annäherungsversuche zur Schulreform betonen eine engere Verbindung zwischen den Systemplänen und dem Verhalten der Lehrer, sie berücksichtigen jedoch nicht im Unterricht enthaltene Dilemmas, die eventuell Versuche, das Verhalten der Lehrer zu leiten, begrenzen könnten. Es wäre vielleicht eine aussichtsreichere Methode, Forschungen anzustellen und Politik zu machen, die die Ausbildung zu verbessern beabsichtigen, wenn man von der Perspektive des Lehrers ausgehen würde. Der Dilemma-Begriff liegt in einer Auffassung der Schulreform, die die Perspektive des Lehrers ernst auffaßt. Statt durch Bewältigung umzugestalten, wird hier dafür gesprochen, daß Reform durch ein grösseres Bewußtsein der Lehrer von Dilemmas-in-der-Praxis und die Art der Lösung dieser Dilemmas stattfinden soll. Die Resultate dieser Lösungen bilden die Tagesordnung für Reform.

Los encaramientos actuales a la reforma escolar ponen hincapié en una mejor coordinación de los planes del sistema y comportamiento del maestro, pero ignoran dilemas inherentes a la enseñanza que pueden imponer límites a los esfuerzos por controlar tal comportamiento. Empezar desde la perspectiva del maestro sería un encaramiento más prometedor para llevar a cabo investigaciones e implantar políticas cuyo fin es mejorar la educación. La idea de dilema se encuentra dentro de un concepto de reforma escolar que toma el punto de vista del maestro con seriedad. Más bien que reformar por medio de la administración, el argumento aquí es por reforma por medio de mayor concientización del maestro en cuanto a los "dilemas en la práctica" y cómo resolverlos. Las consecuencias de estas soluciones se tornan en el programa de reforma.

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