DOCUMENT RESUME

ED 242 049 EA 016 569

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TITLE Using Bureaucratic and Cultural Linkages to Improve Instruction: The High School Principal's Contribution.
INSTITUTION Oregon Univ., Eugene. Center for Educational Policy and Management.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Nov 83
NOTE 44p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Administrator Role; Bureaucracy; Elementary Secondary Education; Governance; Informal Organization; *Interprofessional Relationship; Organizational Climate; *Organizational Communication; *Principals; *School Organization; Social Networks; *Teacher Administrator Relationship
IDENTIFIERS *Linkage Analysis

ABSTRACT

Principals can influence instruction by working through the linkages that govern teacher behavior. What these linkages are, how they affect instruction, and the impact of the principal on them are the focus of this paper. Two kinds of linkages are distinguished: bureaucratic and cultural. An explantation of both, with particular attention to cultural linkages, is made. The contribution of the high school principal is complicated by the fact that high schools are more loosely linked than elementary schools. Yet, past research attended extensively to bureaucratic linkages without analyzing cultural linkages. It is argued that the high school principal has access to weak linkages of both kinds. The task for the principal is to employ the full range of linkages consistently through a multitude of major and minor actions, in order to generate a common purpose and effect in the school. (Author/TE)

USING BUREAUCRATIC AND CULTURAL LINKAGES TO IMPROVE INSTRUCTION: THE HIGH SCHOOL PRINCIPAL'S CONTRIBUTION

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November 1983

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The preparation of this final report was made possible through an Institutional Grant awarded by the National Institute of Education to the Center for Educational Policy and Management. The opinions expressed in this report do not necessarily reflect the positions or policies of the NIE or the U.S. Department of Education.

Abstract

Principals can influence instruction by working through the linkages that govern teacher behavior. This paper focuses on identifying these linkages, the ways in which they affect instruction, and how they are affected by actions of the principal. We distinguish two kinds of linkages: bureaucratic and cultural. We provide an explanation of both, giving particular attention to cultural linkages.

The contribution of the high school principal to the improvement of instruction is complicated by the fact that high schools are more loosely linked than elementary schools. Yet, past research has attended extensively to bureaucratic linkages without analyzing cultural linkages. It is argued that the high school principal has access to weak linkages of both kinds. The task for the principal is to consistently employ the full range of linkages through a multitude of major and minor actions to generate a common purpose and effect in the school.

USING BUREAUCRATIC AND CULTUR[illegible]ES TO IMRPOVE INSTRUCTION: THE HIGH SCHOOL P[illegible]'S CONTRIBUTION

How do secondary principals infl[illegible]e instructional work of their schools? Remarkably little attention ha[illegible]n given to this topic (Greenfield 1982). Generally, studies of administrators examine their attitudes and traits with little attention to showing how those factors, or others, influence the outcomes of schooling (Bri[illegible]s 1982). A long tradition of organizational research suggests that schools are loosely linked organizations that provide limited means for principals to influence teachers' work (Bidwell 1965; Weick 1976). However, recent research on effective schools suggests that in some cases the principal can make an important contribution to instruction (see e.g., Brookover, Beady, Flood, Schweitzer, and Weisenbacker 1979; Wellisch, MacQueen, Carriere, and Duck 1978).

The contradictions between these two bodies of research may be resolved by paying attention to a broader array of linkage mechanisms in schools. Linkages are those mechanisms in schools that coordinate the activities of people who work there (Rosenblum and Louis 1981). This paper argues that principals can identify linkages to or among teachers that are tight or can be tightened and use them to influence instruction. While agreeing that high schools are loosely linked organizations -- in fact, more loosely linked than elementary schools -- it suggests that principals have a wider range of linkage mechanisms available to them than has been recognized in the past. These include not only the more commonly recognized bureaucratic linkages, but also a set of cultural linkages.

This paper briefly describes the concept of linkage in schools and argues that previous studies have attended too much to bureaucratic

linkages and too little to cultural ones. Next, the paper discusses how bureaucratic and cultural linkages work and can be manipulated by secondary principals. Bureaucratic linkages create or limit opportunities for certain kinds of action. They can be modified through formal decisions. Cultural linkages affect the way teachers (and students) think about their work. Such linkages are changed by the principal's symbolic activity. Sometimes the same principal activity, such as the allocation of funcs to instruction or the design of the extracurriculum, can have implications for both bureaucratic and cultural linkages. We conclude by drawing implications for research and current practice.

Linkages in Elementary and Secondary Schools

Weick (1976) provides the fullest discussion of the concept of linkage or coupling and offers a range of definitions of coupling or linkage. Generally, these concern the coordination of individuals in organizations (Rosenblum and Louis 1981). In the simplest form, linkages are tight when the activity of person A leads to some kind of activity by person B. Here linkage connotes responsiveness. Such linkages come to pass through communication, persuasion, the use of sanctions, or even the movement on an assembly line. They are short-term and direct. In other situations, linkage may connote predictability. That is, person A has considerable assurance that person B will behave in a certain way. Schedules, rules, norms, values, and goals all promote this kind of linkage. While the tightness of such linkages varies, they tend to be looser than the first kind. In this case the time between the action and the linked response

may be longer and the connection may be less direct, but the shaping of response can last for a longer time.

There is a general consensus that in comparison to other organizations schools are loosely linked (Corwin 1970; Weick 1976). While there is some ambiguity about what the full range of relevant linkage mechanisms may be, most commentators focus on the lack of strong bureaucratic ties, especially through the weak formal hierarchy in schools (Miles 1981). For instance, Meyer and Rowan (1978) describe how schools are designed so the instructional enterprise is decoupled from the formal structure. Bidwell (1965) speaks of the structural looseness of schools, meaning that teachers work autonomously, unobserved by superiors as well as colleagues. They are hidden "behind the classroom door," as Goodlad and Klein (1970) put it. Lortie (1969) provides an illuminating analysis of the zoning of control that gives teachers discretion over day-to-day, in-class instructional decisions and gives principals discretion over long-term decisions affecting resource allocation and related matters.[1]

Bureaucratic and Cultural Linkages

The challenge offered by Weick (1976) in his discussion of loose coupling is to identify the range of linkage mechanisms that integrate and coordinate activity in organizations. That requires moving beyond just a focus on bureaucratic linkage. This paper extends the notion of linkages by expanding the term to include cultural as well as bureaucratic linkages.

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[1] Some of these "related matters" may actually be decided outside the school altogether as, for instance, when curriculum and textbook decisions are made in the district office. For a discussion of how principals cope with district influence see, Morris, Crowson, Hurwitz, & Porter-Gehrie (1981).

This section outlines the differences between these linkages. Special attention is given to cultural linkages because they have received less attention in the past.

Bureaucratic linkages are the formal, enduring arrangements within an organization that allow it to operate. These include the roles, rules, procedures, and authority relations that Ranson, Hinings, and Greenwood (1980) refer to as the "prescribed framework" of the organization. The purpose of these linkages, as expressed by Weber (1947), is to control the behavior of organizational members. Attention to the prescribed framework alone, however, offers a limited, static view of the organization which assumes that formal arrangements determine behavior (Turner 1977). This view ignores a great deal of the activity in organizations that shapes how individuals in the organization interact. The prescribed framework must be periodically renegotiated (Strauss 1979). It is frequently violated, sometimes for the organization's own good (Dalton 1959), and it is intentionally recreated on occasion through reorganizations that cannot be understood simply with reference to that framework alone (Ranson, Hinings, and Greenwood 1980).

The prescribed framework is one means of coordinating the activities of a school staff, but it shapes only some of the behaviors of individuals. While that framework is loose, the activities of the school still continue in a highly patterned and regular way (Meyer and Rowan 1978). The stability of activity patterns stems from the linkage mechanisms that shape them. One of the most important of these linkages is the organization's culture.

Culture refers to the subjective side of the organization (Smircich 1983). More specifically, a culture is the system of publicly and collectively accepted meanings for the activities of a group of people (Pettigrew 1979).[2] Analysis of an organizational culture will focus on three areas: its content, which refers to the meanings that are shared; the means of denoting the culture through symbols, stories, and rituals; and the communication networks that allow for the negotiation of shared characteristics that are most appropriately viewed as bureaucratic linkages. There has been a recent growth in interest in the cultural side in organizational studies (Smircich 1983). Culture can be an important linkage mechanism. Deal and Kennedy (1982) speak of it as the glue that holds organizations together, but others note that organizational subcultures can create problems for internal coordination (Gregory 1983, Riley 1983).

Because cultures often arise naturally in organizations, they may not be considered one of the linkage mechanisms at the disposal of managers such as principals. However, one view of the manager's leadership responsibility is that the main task is to create coherence between the organi-

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[2] Culture has been used in a number of ways in organizational studies. Smircich (1983) distinguishes between uses of the concept as a variable and as a root metaphor. The first approach views the organization as a system and culture as simply a part of the organization or its environment. This approach is easiest to reconcile with existing organizational research. In the second approach, culture replaces system as the guiding metaphor, and organizations are viewed as expressive forms rather than in economic or material terms. This second approach has a number of variants reflecting different conceptions of culture in anthropology. While it is closer in some ways to the major traditions of the study of culture, the second approach is more difficult to incorporate with existing organizational research. By treating culture as an internal characteristic of the organization, we are more closely allied with the first approach.

zation's basic purposes and its culture (Selznick, 1957). Relying heavily on the more recent business literature (Deal and Kennedy 1982; Peters and Waterman, 1982), we argue that strong cultures with appropriate content can promote school effectiveness and that principals can contribute to the meanings.

There have been a few studies of the cultures of high schools (e.g., Gordon, 1957; Lusick, 1973), but these have attended more to the subculture of students than that of staff. Yet, there seems to be consensus that a number of school characteristics make it difficult to create strong professional subcultures in these organizations. First, observers agree that the basic purposes of schools are ambiguous and poorly specified (Miles, 1981). Schools also suffer from an overload of purposes that are difficult to prioritize (Boyd, 1978). Thus it is difficult to develop a culture with strong beliefs about what should be accomplished in schools. Second, teachers are isolated, not only from administrators, but also from each other (Dreeben 1973). They get most of their work satisfaction from students rather than peers (Lortie 1975). For that reason, it is difficult for teachers to develop a strong, binding culture of any kind; there is too little interaction for strong shared beliefs to develop. These observations suggest that cultural linkages, like bureaucratic ones, will be weak in schools. However, they do not tell us how much variation there is among schools in cultural linkages or the extent to which the content and cohesiveness of a school's culture can be influenced by the principal. Before turning to these issues we offer an empirical assessment of how secondary schools differ from elementary schools. Then we turn to a discussion of the role of the principal in secondary schools.

A Survey of School Linkages

Most of the arguments that schools are loosely linked are general ones that implicitly compare schools either to other kinds of organizations or to a poorly defined ideal of how organizational linkages should work. The empirical studies that provide the basis for this depiction and for the argument that tighter linkages promote more effective instruction have been conducted primarily at the elementary level. These include studies of teaching (Lortie 1969), of schools as organizations (Meyer et al. 1978), and of effective schools (Brookover et al., 1979). Even the few studies conducted specifically of high schools (e.g., Abramowitz and Tenenbaum 1978) provide little basis for determining whether high schools are more or less loosely linked than elementary schools or for identifying reasons for such differences.

To clarify differences in linkages between levels, we carried out our own research comparing schools at the elementary and secondary level (Firestone and Herriott 1982a, 1982b; Herriott and Firestone 1983; Firestone, Herriott and Wilson 1983). In our exploration of the differences between different school levels (Firestone, Herriott, and Wilson 1983), we explored the possibility that elementary and secondary schools might show different mixes of bureaucratic and cultural linkage. Our data come from a survey conducted in 111 schools--59 elementary and 52 secondary -- in Pennsylvania and New Jersey. Teachers were asked to serve as informants about conditions in their schools, and almost all of them (85%) responded.

Generally, our results indicate that secondary schools are more loosely linked both bureaucratically and culturally than are elementary

schools. We examined three bureaucratic linkages. The first was the centralization of influence over instructional decisions. The second was principal control over broad decisions related to school program and staffing patterns, and the third looked at the extent to which rules governing teacher behavior were enforced. There is substantially less centralization of influence over instructional decisions in secondary schools (Table 1), but differences in other areas are not significant. Thus, in the area that is crucial for those who believe schools are loosely coupled, linkages are even looser in the upper grades; but otherwise differences are small.

Two aspects of cultural linkages were explored. The first, a measure of agreement on goals for student development, examined the extent to which the meanings or purposes of the school were shared. The second was the extent of staff communication. For meanings to coordinate behavior, there has to be an ongoing stream of communications among members of a school so meanings and values can be shared. Thus, communication supports a strong culture. We also looked at two directions for linkages: vertical linkages between teachers and administrators, and horizontal linkages among teachers. Generally, cultural linkages were weaker in high schools (Table 1). This was especially true for goal consensus among teachers and to a lesser extent between teachers and the principal. Differences in communication patterns were significant but smaller.

The implication of these findings is that high schools are even more loosely coupled than elementary schools. Principals have little opportunity to influence teachers or even to communicate with them, and high school teachers do not talk a great deal about their craft among

Table 1
Mean Differences Between Elementary and Secondary School on Selected Characteristics

Variables	Elementary Mean	Secondary Mean	Significant Difference
Bureaucratic Linkage			
a. Centralization of influence, instruction	0.64	-0.73	Yes
b. Centralization of influence, program	0.12	-0.43	No
c. Rule enforcement	0.16	-0.18	No
Cultural Linkage			
a. Goal consensus among teachers	0.80	-0.91	Yes
b. Goal consensus between teachers and principals	0.55	-0.62	Yes
c. Horizontal communication	0.12	-0.24	Yes
d. Vertical communication	0.26	-0.29	Yes

themselves. Moreover, there is especially limited agreement in high schools about what should be taught. Thus, the responsibility for teaching in high schools rests with teachers, not collectively, but singly. Each teacher, in essential isolation, seems to make the major decisions about how to manage his or her students, how to present material, and sometimes what to teach. The principal's task is to influence how teachers make those decisions, and this must be done in spite of quite weak linkages.

Linkages, Instruction, and the Principal

The relationships between linkages and instruction work in a variety of ways. Generally, bureaucratic linkages establish constraints and opportunities on how teachers teach. Cultural linkages shape what teachers want to do or how they take advantage of those constraints. Both make teacher behavior more predictable, and shared wants facilitate joint action. Such linkages can also have more direct effects on what students learn. The following sections examine how each kind of linkage relates to instruction and how each can be manipulated. Principals face a further difficulty because the same action can affect bureaucratic and cultural linkages differently. The third section illustrates this point.

Bureaucratic Linkages

The most common way in which principals are thought to impact instruction is by the bureaucratic device of close supervision and evaluation of teachers' activities. This is conceived as the primary means of control. Much of the effective schools literature has added renewed interest in the belief that supervision is the secret to effective leadership. This perspective has a strong normative orientation. That is, there is a belief

that principals ought to be doing lots of supervision. Moreover, supervision is an attractive mechanism for control because it seems so direct: one person helps or directs another person to do something.

Yet, there are a number of flaws with the argument that supervision is the backbone to instructional improvement. First, for supervision to be effective, it has to be done frequently (Dornbusch and Scott 1975). The old adage "more is better" applies here. However, there is ample evidence indicating that supervision is not a frequent activity (Morris et al. 1981, Newberg and Glatthorn 1983). This problem is even more acute in secondary schools where content specialization means that principals may not have the expertise to adequately evaluate performance and where their authority to do so is often questioned. Second, there are few incentives for principals to do more than pay lip service to the process of supervision. With the exception of a few school systems that have operated on a merit-pay system for many years (Natriello and Cohn 1983), we have found little evidence of negative sanctions or positive rewards for principals to either ignore or make supervision a top priority. Third, although most of the literature on educational administration pays homage to the importance of supervision, most principals have had little experience in working with constructive supervision programs. Finally, as Natriello and Dornbusch (1980-81) point out, for supervision to be effective recommendations in an evaluation have to be followed up. It is not enough to point to weaknesses. That just encourages insecurity and resentment. In addition, resources need to be committed to follow-through activities so weaknesses can be overcome.

All the above arguments add evidence to Corwin's (1981) contention that supervision is not the crucial bureaucratic linkage in schools. Yet other forms of bureaucratic linkage are possible. Perhaps the most important of these comes through the indirect control of individuals' activities. To understand this kind of linkage, it is important to recognize that the way work is designed will affect how people interact with each other and their attitudes towards their work. For instance, Bossert (1979) has shown that the way students choose their friends in class will depend in part on the teacher's predilliction for stressing competitive or noncompetitive instructional activities. Similarly, Cohen (1973) argues that open-space classrooms provide an outlet for ambitious teachers. They do so by providing opportunities for teachers to observe each other at work so the better teachers can gain the esteem of their peers if they perform well.

Thus, how instruction is carried out will depend in part on the way that work is formally structured. Bossert and his colleagues (1982) identify three dimensions of the instructional setting that the principal can manipulate through authority of office. These dimensions, and others like them, appear to be crucial bureaucratic linkages through which the principal can influence instruction. These linkages are tighter at the elementary level, however. High school principals share decisions over some of these areas with assistant principals and department heads. They are:

time: including daily and annual schedules that control instructional time, the times when tests are given that control student progress, the times when students are pulled out of class for special classes or assemblies, and the amount of time devoted to paperwork and other housekeeping activities that reduce instructional time.

There are important organizational constraints on the amount of time spent by students on academic tasks, and in many cases the principal is a key actor in controlling these constraints. By buffering classrooms from external interruptions and manipulating internal activities to maximize instructional time, principals can have a powerful impact.

class size and composition: including the number of children in a particular room and the mix of gender, ages, behavior problems and the like.

The kinds and numbers of students that a teacher faces has an important effect on the way that classroom instruction is delivered which in turn has an impact on learning (Filby et al. 1980).

grouping: including the arrangement of teachers as well as students.

Students can be grouped by ability levels or curriculum tracks as well as being assigned to special education programs. These student arrangements have an impact on achievement (Beckerman and Good 1981; Bossert 1978). In addition principals have some control over how teachers are grouped--by departments, grade-level teams, or as autonomous individuals--which further affect students' learning experiences.

In addition to these three factors we offer two more:

resources: these resources may include money, new instructional materials, and easy access to building facilities.

Principals usually have some discretionary funds at their disposal and through its judicious distribution can greatly enhance innovative instructional activities. Materials, including such mundane things as paper and pencils or more substantial items like books and computer software, also contribute to learning activities. While many of these things are present in a school, ignorance and inconvenience prevent many teachers from taking full advantage of them. Through communication and coordination efforts a principal can create more opportunities for utilizing the full potential of these resources.

> knowledge and skills: an important neglected resource is the human one. This includes knowledge already within the system as well as external knowledge.

The possession of untapped skills among teachers as well as their potential for learning new ones affects student learning. Principals can encourage the use of previously unused or underutilized skills within a classroom as well as networking these skills among classroom teachers. The principal can also encourage teachers to seek new knowledge and facilitate that activity by recommending training sessions, providing resources for attendance, and organizing substitute teachers.

Cultural Linkages

While bureaucratic linkages work through the "organization's prescribed framework" to provide or limit opportunities to act in certain ways, cultural linkages work directly on the consciousness of organizational actors to influence how they think about what they do. Cultural linkages affect at least two aspects of thought. The first is the

individual's definitions of the task. The school's organizational culture provides answers to such questions as: What does it mean to teach? What should be accomplished by teaching? What techniques or approaches are available? What are the children like who are being taught?

The second is the individual's commitment to the task. Commitment refers to the individual's willingness to devote energy and loyalty to the organization and the attachment of that person to the organization. It includes a willingness to keep working in the school (continuance commitment), emotional bonds to the school (cohesion commitment), and a willingness to follow the rules and norms governing behavior, also called control commitment (Kanter 1968).

Specification of task definitions is important because in education as in many people-processing fields, there are few clear answers to the questions of what is to be done or how it should be accomplished (Perrow 1965). Moreover, Brookover and his colleagues (1979) find that teachers' expectations for their students have direct effects on what they learn. Commitment is an issue because education is viewed as a low-commitment occupation (Lortie, 1975) where people often have strong conflicting attachments to family or other jobs. The problem of other jobs is especially difficult at the secondary level (Cusick 1981). Often, the improvement of instruction requires not just a different kind of effort, but more of it as well.

A focus on cultural linkages raises three kinds of questions. First, What is the content of the culture that promotes successful instruction? That is, what kinds of task definitions and commitments are desirable? Second, How is that culture denoted? What forms, symbols, or stories carry

the desired content? Finally, how and to what extent can the principal influence the school's culture?

Cultural content. One can derive the appropriate culture for successful instruction from a number of sources: One is to look at the culture of successful institutions. There have been few if any attempts to study effective high schools from this perspective, but studies in other situations provide some suggestions about what might be found. For instance, Berman and McLaughlin (1979) found that a set of especially innovative school districts had cultures with the following characteristics:

- an emphasis on diversity in services delivered,
- the primacy of improved educational service over "bureaucratic or political" concerns,
- open boundaries to the environment which allowed for learning about new approaches and new resources, and
- norms of mutual trust and encouragement for risk taking.

The most noted evidence for the idea that certain kinds of organizational cultures promote improved performance currently comes from the business literature. Two books explore this idea at length. Deal and Kennedy (1982) argue that it is a strong culture that separates high performance companies from those that do not do as well in any market sector. Peters and Waterman (1982) conclude that those cultures include the following:

- a bias for action by trying things rather than elaborate planning,
- norms encouraging the employee to stay close to customers and try out new ideas on them,
- a respect for individual autonomy and entrepreneurship combined with a belief that productivity comes through people,

- strong definitions of what the company stands for and the kinds of products with which it deals, and
- a commitment to developing high-quality products.

There is a significant amount of overlap between the kinds of cultures identified by Peters and Waterman (1982) and Berman and McLaughlin (1979). Both emphasize a commitment to quality service, a willingness to take risks, a setting where individuals can experiment and take initiative, and close ties to the outside world, which is a source of ideas as well as political and financial support. It seems probable that a study of excellent high schools might find that similar values are stressed.

The study of successful institutions in other spheres helps address the problem of commitment and that part of the task definition issue related to how people should relate to each other. It does not address the more central question of task definition, however, which is how the craft of effective teaching should be defined. Advances in this area can be made by synthesizing the existing research on teaching and deriving from it some themes that one might hope to find in the professional culture of high schools (for one such synthesis, see Squires, Huitt, and Segars 1983).

Cultural denotation. The study of cultures frequently separates the contents of a culture--what is valued or how tasks are defined--from its expressions (Barley 1983). The latter refer to the ways those contents are communicated to members of the organization. Typically, the major themes in a culture are expressed redundantly through a variety of symbol systems (Barley 1983). In fact the repetitions of a theme is what convinces the analyst of its importance. The analysis of symbols is a complex task because effective symbols are inherently ambiguous. The power of

symbols comes from the way they combine particularistic elements of the specific situation with more universalistic issues or concerns of humankind. Moreover, the relationship among these particularistic and universalistic elements may shift with the situation, and the most powerful symbols may combine a number of such elements (Cohen 1979).

Studies of organizational cultures emphasize two symbol systems for communicating the contents of a culture. These are stories and icons or rituals. Stories include myths and legends as well as true events. The true event takes on much of its meaning as it is interpreted in the telling. Usually stories have to do with individuals and are interpreted to indicate positively of negatively valued traits in the likely consequences of certain actions (Martin, Feldman, Hutch, and Sitkin, 1983). Deal and Kennedy (1982) emphasize that stories are often about heroes, but the definition of a hero may vary. Sometimes the hero is a now-mythical figure like the founder of a company (Thomas Watson of IBM) or the person who gives a school a new mission (Arthur Morgan of Antioch College). At other times it is a representative of "the common worker," like the assembly line worker who made the company president put on safety glasses while touring her area. Stories have been collected in both business and higher education settings, but not to the same extent in high schools. It would be useful to find out whether such stories exist among high school staffs (and students), and, if so, what they are about.

Icons and rituals are a second means for communicating culture. Icons are the physical manifestations (logos, mottoes, and trophies) of ceremonial activities (rituals). Barley (1983) has shown how the culture of undertakers can be constructed from an examination of the symbolic value

of such artifacts and activities as the decor of funeral parlors, the way the face of the corpse is arranged, and even the way removals from the home are handled. It seems likely that a great deal can be learned about high schools through similar analyses of assemblies, teachers' meetings, community functions, report cards, awards and trophies, lesson plans, and the furnishing of classrooms and work spaces, among other things.

In addition to symbol systems, the study of cultures must examine communications patterns. Stories and symbols cannot carry their meaning unless there is an ongoing flow of communications among organizational members. The amount of internal communications probably varies among different types of organizations. While opportunities to share are limited in education, it may still be useful to look at variation in communications among schools or to explore the way that networks work. In business, Deal and Kennedy (1982) have identified special roles that facilitate internal communications. These include priests, whisperers, gossips, and secretarial sources among others. Similar specialized roles may also exist in highs schools and serve important functions that are as yet undiscovered.

Principal influence. The third question about cultural linkages is how can they be influenced by the principal. The new management literature on organizational cultures is rather optimistic about the ability of managers to shape cultures (Deal and Kennedy 1982; Peters and Waterman 1982). However, earlier studies took a natural systems perspective which assumed that an organization's culture developed incrementally and largely outside the conscious control of any group in the organization (Gouldner 1959). Until there have been more studies of the professional cultures of schools,

we need to withhold judgment about how susceptible they are to administrative influence. Nonetheless, we can suggest a number of hypotheses about how principals could influence the culture of their schools that reflect the different ways that organizational cultures are denoted symbolically and communicated interpersonally.

First, principals can manage the flow of stories and other information in their schools. Metz (1978) describes a principal who actively shaped the culture of his school in the mid-1960s by controlling the circulation of stories. During a time in the community where many people defined the frequent disruptive events in all schools in the district as part of a collective action that reflected injustice in the larger society, this principal tried to maintain the view that discipline problems were rare and limited to individual outbursts that teachers could handle with patience and skills. He frequently told stories such as the following that reinforced his own view:

> I saw this done beautifully in a classroom with the kids. "I ain't going to study today, 'cause I don't feel like it." And the teacher just grinned at him. And she said, "Well, I'm going to give you a book just in case you change your mind." In five minutes he was studying (Metz 1978: 195-96).

This spreading of stories that reinforces a preferred culture is characteristic of the culture-shaping activity that managers are exhorted to adopt (see, e.g. Deal and Kennedy 1982). However, this principal went beyond the promulgation of reinforcing stories and actively suppressed viewpoints different from the one he projected. For instance, he limited discussion at faculty meetings and was able to minimize knowledge of black students' collective walkout of an after-school dance. In other instances, the principal may influence the spread of stories by adjusting schedules and

physical spaces in ways that facilitate or inhibit communications among teachers. Thus, the principal may b position to both initiate and reduce the spread of certain stories

Second, the principal can cr and manipulate symbols and rituals. These might include academic pep ssemblies or symbolic rewards for especially effective teachers. In some cases, the principal may actually become a symbol. Consider a description of a principal in an all-black school in Atlanta. This ghetto school was considered one of the worst in the system until the new principal turned things around. Through his own deportment, he came to symbolize a new assertive order that took education more seriously and required an orderly atmosphere for instruction:

> He dominated the school. Hogans (the principal) is a man of great energy. He moves about the campus in perpetual motion, looking severe and determined, always carrying his walkie-talkie. Hogans does not want to be out of touch with any part of his sphere...His requests sound like commands. There is an immediacy about him, and unwillingness to wait or be held back (Lightfoot 1981, p. 20).

Moreover, by being a black person who had come up from the ghetto through education, he became a symbol to his own students of what was possible with hard work.

Third, the principal can be an active communicator of the culture. Principals typically communicate a great deal with their staffs. A recent set of time-and-motion studies of principals indicate that they spend a phenomenal amount of time in unscheduled, impromptu conversations with teachers and students (see, e.g. Martin and Willower 1981; Kmetz & Willower 1982). The sheer frequency of interaction suggests that principals do practice what Peters and Waterman (1982) admiringly call "management by wandering around." Yet, these studies tell us very little about what is

discussed. We need more research like Gronn's (1983) that examines the content and sequence of the frequent, disconnected conversations of principals to see how they are used to influence events and accomplish administrative work. Existing research suggests that for the principal to shape a school's culture, considerable consistency must be maintained across hundreds of interactions. Consider Metz's summary of the work of the first principal described above:

> Mr. Brandt's style of running the school...made it hard to define. It resembled an impressionist painting. Seen from up close, where the faculty and students were, his style had a soft, diffuse, blurred appearance. But seen from the distance perspective of comparison with (another school) it was sharp, clear, and vivid. Like an impressionist painting too, it was made up of a myriad of little touches, each seemingly meaningless, but taken together forming a sharp image. (1978, p. 190)

She goes on to describe how this principal pays lip service to almost every educational philosophy imaginable while constantly returning to his own preferred solution to the problem of order. He gains the effect he desires by constantly coming back to his main theme without crystallizing opposition to it.

Finally, we suggest that principals must have high energy levels and considerable self-consciousness to influence the cultures of their schools. Principals do spend long hours at their work (Wolcott, 1973). However, case studies of principals who seem to shape their schools' cultures suggest that a great deal of time, energy, and initiative may be required. In fact, it may be that this work cannot be done by one person alone. The study of Hogans, the Atlanta principal, indicates that he is supported by a "kitchen cabinet" consisting of a vice-principal, a department head, and the school's registrar (Lightfoot, 1981). This same phenomenon has been

seen in some more effective middle schools in Philadelphia (Newberg and Glatthorn 1983). Still, high energy and help are not enough. As Metz's case indicates, the principal must be able to subtly work into interactions with others the major themes that are deemed important.

Simultaneous Effects of Principal Action

Although bureaucratic and cultural linkages in a school are conceptually distinct, the actions of a principal designed to influence one kind of linkage may influence both. This can work for the principal if effects on both linkages are complementary, but it will be counterproductive if those effects are contradictory. A few examples will illustrate this issue. Consider first the problem of ability grouping in the classroom. Grouping is essentially a bureaucratic control on instructional practice. Grouping to minimize variation in ability allows classes with faster students to move more quickly through the curriculum and get to enrichment material or address more complex topics. Classes with less intelligent students proceed more slowly and cover material more intensively until the material is learned. Thus, from a pure management perspective, there seems to be some advantage to ability grouping (Calfee and Brown 1979). On the other hand, ability grouping also labels students and creates differential expectations for what they will learn. To the extent that teacher expectations (a part of the school culture) really do affect what students learn (Brookover et al., 1979), ability grouping will seriously impair the education of less intelligent students.

School discipline policy is another area that can have differential effects through bureaucratic and cultural linkages. Any discipline policy

that effectively maintains order in a school will increase time for instruction and therefore improve opportunities for effective instruction through a bureaucratic linkage. However, if this discipline is accompanied by what Metz (1978) calls an incorporative view of education that perceives the child as an empty vessel who must be taught a curriculum defined by adults and to follow rules established by adult authority, opportunities for higher order cognitive thinking and more advanced social development will be limited. Metz (1978) argues that if discipline is grounded in a more developmental view of education that views students as more actively involved in the learning process, more opportunities for advanced learning will take place. At the most authoritarian extreme, excessive emphasis on discipline and order can actually create a culture that impairs learning. In this case the same efforts to work through bureaucratic linkages can have very different impacts depending on what meaning is imposed on them by participants.

Manipulation of bureaucratic linkages can also reinforce cultural content. Resource allocation is the best example of this possibility. Allocation of discretionary funds in a school in a manner that is fair and provides extensive support to instruction can promote commitment among teachers and signal that instructional priorities are more important than other concerns in the school such as the extracurriculum. As these examples indicate, an important task for both the researcher and the school administrator is to ensure that bureaucratic and cultural linkages are mutually reinforcing.

The Problems of Working Through Linkages

The principal can shape both the bureaucratic and the cultural linkages in a school; sometimes the same action does both. However, none of these linkages alone is a powerful means for influencing instruction. The principal's contribution comes through the orchestration of a variety of actions working through a range of linkages to have a consistent impact on what is taught and how. Why this is so becomes apparent when one considers the separate effects of a principal's efforts to use each linkage mechanism as a means of improving instruction.

The difficulty with employing bureaucratic linkages is that the principal's opportunities to exert influence are constrained. We have already suggested that limits to the principal's authority reduce the utility of supervision as a strategy. There are also two major constraints to the use of ecological controls to shape teachers' opportunities to teach. First, principals' options are severely constrained by external policies. The major design decisions about the high school program have been in place since early in this century and are codified in state law or board policy (Cohen and Neufeld 1981; Cuban 1982). The principal may have some say at the margins of the program over whether the school day has six periods or seven (Boyer 1983). However, more basic decisions about whether there will be a counseling department, a sports program, or a social studies department are already decided. Similarly, recruitment and selection decisions are often constrained by district policies, disciplinary actions, by court decisions, and the distribution of discretionary

resources by the fact that these resources are quite small when compared to the overall budget of the school, most of which is committed to personnel.

Second, even when a decision is to be made, the principal rarely makes it alone. There is substantial agreement that the principal's role is highly interactive, requiring discussions with teachers, district office staff, and, in high schools, department heads (Greenfield 1982). The nature of this interaction is not so clear, however; some people stress the reactive nature of the principal's role (Wolcott 1973) and others the proactive (Edmonds 1979). In any case, major decisions are often delegated, made by committees, or guided by formulae in ways that limit the principal's discretion to shape teaching conditions.

What increases opportunities for the principal to shape the bureaucratic linkages governing teachers is the ambiguity surrounding both that role and the organization of the school (Greenfield 1982). High schools in particular are the target for a growing body of policy delineating what work should be done (Boyer 1983). The resulting policies need to be interpreted and are sometimes contradictory. By serving as the interpreter of policy, the principal gains authority to shape instruction (Crowson and Porter-Gehrie 1980). For instance, one principal used a little known state law to buttress a decision on pledge of allegiance ceremonies when district policies were going against him. He even sought support from the local district attorney when his interpretation was challenged (Metz 1978).

The use of cultural linkages to shape instruction depends on another kind of ambiguity--the ambiguity governing the principal-teacher relationship. McPherson points to the real ambivalence that teachers have for

principals. It is as if they say "Leave me alone. Don't interfere in my classroom. Don't tell me how to teach. Protect me from all who challenge me. Support my decisions. And show you care about and appreciate me" (McPherson 1979, p. 241). Teachers look to their principal for certain kinds of support. They want to know that the principal will maintain an orderly climate in the school and back them when they have discipline problems. Too, they want protection from parents and community groups who challenge their decisions. Finally, they look to the principal for moral support, for a word of praise after spending almost all their working day with no adult contact. At the same time, they want autonomy to teach the way they want and often what they want (Cusick 1981). Usually, they do not see that their wants may require some sort of trade-off. They want it all.

This ambiguity stems from three characteristics of teaching (McPherson 1979). First, neither criteria for success nor means of achieving it are clear. Even when the results come out right, teachers find it hard to know if they can take credit. This ambiguity leads to the second problem--vulnerability. Teachers are sensitive to infringements placed on their authority and autonomy by both the public and students. Finally, teaching is a lonely occupation with little chance to talk about one's work with others who can appreciate what has been done.

These conditions give teachers a great stake in viewing the principal as a powerful, wise individual whose praise is meaningful and protection is sure. The principal is in the right place to become a reference point and to establish norms because he or she is close, has relevant expertise, and is in a position of authority. As a result, teachers invest a good deal of

emotion in their view of the principal; the office is a symbolic one that can be used to manipulate the stories and rituals that interpret teacher's work. On the other hand, when the principal cannot meet teachers' standards, when things go wrong that no one can control, there is a strong tendency to make the principal a scapegoat (McPherson 1979). However, this, too, is a cultural process, one that can victimize the principal rather than being used to advantage.

Although principals are well placed to affect the school's culture, it is not clear how well that culture can influence instruction. One observer of principals suggests that when a principal "turns a school around," the change is usually perceived in the student climate and the discipline situation (McAndrew 1981). In the study of the effective high school in Atlanta mentioned above, the observers noted that while the climate of the school and motivation of students and staff had improved, instruction had not (Lightfoot 1981). However, it is also clear that the principal did not place a high priority on trying to shape instructional practice. This lack of attention to instruction seems to be typical. In many schools principals seem overly ready to leave instruction to teachers and not to try to shape thinking about what should be taught and how. Thus, even though results have been less than impressive in the past, it seems likely that the potential for influence is there but unrealized.

In sum, the conclusion of this analysis is not that emphasis on any one kind of linkage will provide a magic wand to give the principal great influence over the high school's instructional program. Rather, the implication is that the principal has a number of weak means of control or coordination available. These are employed through countless interactions

with teachers over the course of the school day and year (Martin and Willower, 1981). A few interactions result in strategic decisions affecting major time and resource allocations (bureaucratic linkages) or the school's culture, but most are quite minor. These interactions can become so numerous that the principal is more reactive than proactive. The principal's task is to develop a clear vision of the purposes of the high school that gives primacy to instruction and to carry it through consistently during those countless interactions. By doing so, the principal uses bureaucratic linkages to create opportunities for teachers to follow that vision and minimizes chances to operate in different ways. At the same time, the principal uses cultural linkages to communicate that vision so that, to a greater or lesser extent, it becomes the teachers' own culture. The initiative for planning and carrying out instructional work then rests with teachers, but they are much more likely to incorporate the principal's perspective. This approach to the job is similar to the task of leaders of many kinds of organizations (Selznick 1957, Peters and Waterman 1982).

Research Implications

This discussion has provided details about the complex nature of secondary schools, how loose the linkages are between teachers and administrators, and the difficulties a principal confronts in using linkages to improve instruction. However, our argument has been largely speculative and has raised issues that require additional research. First, it is important to further clarify the nature of linkages in schools. The research in this area has been uneven. Studies have been conducted on the

distribution of authority and influence (Corwin, 1970), on supervision by principals (Dornbusch and Scott 1975) and on communication patterns (Lortie 1975, Little 1982). Research has also been conducted on other bureaucratic linkages like grouping practices (see Calfee and Brown 1979), and still others like scheduling practices and resource flows should be relatively easy to document. The most problematic tasks facing researchers are to identify the nature of organizational cultures and to develop means for comparing them in terms of content, means of denotation, and effectiveness as sources of social constraint or obligation on individual behavior. These tasks may require borrowing conceptualizations and techniques from disciplines or areas of inquiry not usually relied on in the study of schools.

The second issue is to clarify the impact of school linkages on the nature of instruction. To address this issue it will be necessary to identify the areas of instruction that vary among teachers and schools. There seem to be many teaching activities, like lecturing and recitation, that occur quite uniformly across schools and time (Sirotnik 1983, Cuban 1982). Other important attitudes and activities, like teacher expectations for student performance or their allocation of time in class, do vary among individual teachers and schools in ways that influence instruction (Brookover et al. 1979). These should be the focus of attention for future research. What has yet to be done is to identify whether tight linkages affect the distribution of these attitudes and activities.

Finally, it is important to explore how principals use linkages to change instructional practice. Too much research on principals has focused on how personal attitudes and traits affect behavior (Bridges 1982).

Little attention has been paid to the opportunities and constraints on principal behavior created by the organizational settings in which they work. Research in this area should identify the organizational linkages that are most susceptible to adjustment to the principal. For instance, it may be that certain norms of the professional culture are established by teachers and cannot be influenced by the principal. Yet principals may be able to modify other linkages easily. It will also be important to learn more about how principals change these linkages. Modifying organizational cultures may not always be a straightforward task. Changing schedules or grouping patterns may require negotiations with a variety of people. Finally, research should examine how the multiple weak linkages accumulate, either cancelling out or reinforcing each other, and how principals can manipulate these linkages.

These issues carry methodological as well as conceptual implications. A full understanding of school linkages, the impact of linkages on instruction, and the role of the principal in using linkages to change instructional practices requires a more intensive study of the American high school. The research effort needs to move beyond the cross-sectional survey approach that has dominated research on school administration (Bridges 1982). While there will be a place for such studies in the future, researchers now need to spend considerably more time in schools. A number of approaches, including observational, ethnographic, qualitative or interpretative methods, can be adopted as the means to focus attention on learning first-hand what is happening in schools. These approaches allow for ample exposure to school activities. Furthermore, research time should be devoted to learning more about linkages, instructional practices, and

the impact of the principal on them. Three specific methodological implications have evolved from our thinking about these problems.

First, there is the need for thicker description of what life is like in secondary schools (i.e., the linkage patterns) and how principals create or maintain some order and direction in that life. As Geertz (1973) points out, it may be fairly simple to describe the concrete actions that are present. However, what is not as simple are the meanings that are given to actions by the various participants. It is those meanings that help determine both the cultural and bureaucratic linkages in a school. By intensively studying events and behaviors and trying to understand how principals, teachers, and students interpret them, we will have a better understanding of the potential impact the principal may have.

Second, linkage patterns and instructional practices in schools do not just happen; they evolve over time. Consequently, methodologies must be employed that emphasize an historical perspective. Such a perspective allows one to follow the development of both linkages and instructional practices and to unravel the relationship between them. For example, there are a number of ways that cultural linkages can develop (c.f., Clark 1970) in schools. The school may have been established "de novo" with a clear purpose in mind. The creation of magnet schools that focus on specific subject areas are an example of this. Cultural linkages may also evolve out of a crisis over a key event. A school may be floundering because of a lack of direction. A consequent collapse or common rallying point may be sufficient to focus and redirect the efforts of the school. Yet another alternative is that a strong leader takes charge and gradually tightens the cultural linkages in the school. In all three cases, a look at current

conditions would show evidence of tight cultural linkages.

Yet, without understanding the historical context, the detailed relationship between the cultural linkages and instructional practices would be missing. The important point is that research strategies need to emphasize the exploration of past events and patterns of leadership to determine their impact on present school conditions. The use of historical techniques to uncover the development of cultural linkages has been almost entirely overlooked by the research community. An emphasis on describing and interpreting past events will help us better understand current situations and enable us to interpret the role that linkage mechanisms have played.

Finally, research design must also be considered since design features influence what is studied and how long it is studied. Here we can learn a great deal from the shortcomings of effective schools research. Those research designs have been faulted on a number of grounds (Rowan, et al. 1983, Ralph and Fennessey 1983). Two criticisms are salient. The first is the vexing problem of causal ordering among variables. Do linkage mechanisms impact instruction or does instruction affect linkage patterns? Designs must be developed that disentangle that question. Intensive observation over long periods of time, something missing from much of the qualitative effective schools research, is one solution. Another way to address the causal ordering is through an historical understanding of the people and events leading to present conditions. As Rowan et al. (1983) suggest, it would also be instructive to develop a design that focuses on schools in transition, i.e., those currently in the process of moving from loose to tight linkages. By following the changes in linkage patterns over

time, one can clearly assess their effects on instruction and the impact of the principal.

An equally troubling design problem concerns generalization. Much of the effective schools research has focused on the characteristics of a narrow sample of unusually effective schools. The assumption has been made that those findings can be applied to other kinds of schools. Similarly, if tight linkages are associated with uniformity of instruction, can it also be argued that schools with loose linkages can change instruction solely by working on linkage mechanisms? Indeed, there may be some other factors that are affecting instruction in these schools. The problem has a two part solution. First, it is necessary to understand what is important about tight linkages in schools. Are they associated with uniformity of instruction? This can best be done by learning from intensive observation in a small number of schools where tight linkages exist. Once the relationship has been established, it may prove useful to use a survey approach to test wider applicability of the findings to different types of schools. The effective schools research moved to prescription without considering the second step, while the research proposed in this paper has yet to fully address the first step.

Conclusion

Research on effective schools has promoted the view that schools can be organized to improve instruction and that principals have a key role to play. Yet, that optimism for secondary schools must be tempered by the conclusion that they are loosely linked organizations where the impact of principals on instruction is limited. The argument of this paper is that

cultural and bureaucratic linkages independently and interactively influence the quality of instruction. Ways in which the principal can effect these linkage patterns have also been explored. An adequate understanding of the contribution of the secondary principal to the quality of instruction rests in a careful analysis of cultural linkages and how they interact with bureaucratic linkages.

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