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DEFINING EDUCATIONAL QUALITY

Don Adams

One of the striking characteristics of the 1980s and 1990s is the international focus on educational quality. To some extent, plans and policies calling for higher quality schooling now supplement or even replace earlier attention given to such priorities as educational expansion and school access. The universal assumption seems to be that current education is inadequate to cope with the social and economic transformations underway or to which people aspire.¹

Conditions both external and internal to education appear to account for this recent trend. External or environmental factors include a reaction to an extended period of fiscally demanding emphasis on quantitative growth. This in general fails to achieve the prevailing national expectations and results in many "educated" unemployed, and both economic and technological changes increase the demand for higher level skills and knowledge. A major educational factor internal to the educational system relates to contemporary school and classroom level research which has created a new sense of professional optimism by suggesting that schools, irrespective of their socioeconomic environment, can be designed to increase learning.

Yet even under intense scrutiny, the concept of educational quality has remained somewhat elusive, and many persistent questions surround any attempt at definition. What knowledge bases or theories can be of assistance in trying to define quality: Social theories? Learning theories? Instructional theories? Effective school research? Educational production-function studies? Do various educational theories and paradigms generate different definitions? What is the relationship of politics and power to conceptualizations of educational quality? That is, it may be important to ask, quality for whom or, quality according to whom? Who decides on the operational definitions of quality? Are there differences in definitions given by those at the "top," e.g., the central ministries or national policy groups, and those at the "bottom," e.g., community leaders or teachers? To what extent can generalizations be made across nations, communities, schools, or even classrooms? When are there tensions between the educational interests of the state and those of communities and families? If different clientele have different definitions, how can policies be developed which address contradictions? And, in attempts to design better educational systems, how are size, selectivity, and diversity of student population related to quality? Do policies of universalization lead to lower quality?

These are but a few of the questions which arise when trying to understand, and utilize for planning purposes, the concept of educational quality. In this brief paper three issues are addressed. First, distinctions are drawn between quality and some of the other related educational concepts used to characterize and assess educational systems, organizations, and programs. Then multiple meanings of educational quality are identified, which sparks a beginning attempt at operationalization of the term quality for purposes of easier communication, planning, and evaluation of educational change.

Some Distinctions Between Quality, Efficiency, Effectiveness, and Equity

Education literature is frequently imprecise and inconsistent in the use of the terms quality, efficiency, effectiveness, and equity. A comprehensive review of the development and many usages of these terms would require exploration of several disciplines and could easily fill a large volume. The following brief examinations of distinctions between these concepts may, however, contribute to better communication among those associated with the planning and evaluation of educational change.

In practice, quality and its associated concepts are usually defined as outputs, outcomes, processes, or inputs. Outputs typically refer to changes in student achievement, completion rates, certification, skills, and certain attitudes and values. Outcomes, if distinguished from outputs, are conceptualized as the longer term consequences of education such as employment, earnings, and changes over time in attitudes, values, and behavior. Inputs, if limited to factors subject to policy manipulation, include characteristics of teachers, pupils, facilities, curriculum, and fiscal and other resources necessary for the maintenance or change of the educational enterprise. In a broader sense, contextual influences may also be considered as inputs. Processes are usually interpreted as the forms of interaction between teachers, students, administrators, materials, and technology in educational activities.

Efficiency may be defined simply as the relation of outputs to inputs. Or more precisely: "... efficiency is defined as existing where the output is maximized for a given level of input (measured as cost) or where input is minimized for a given level of output" (Windham 1986)². A more inclusive definition is offered by persons associated with the USAID supported IEES Project: "The concept of efficiency provides a broad perspective from which to analyze an educational system: one in which the costs of educational inputs and processes can be related to benefits, such as improved effectiveness . . . this concept has meaning only if outputs and outcomes are correctly specified and measured" (Burchfield 1991, Winter). However, inputs, outputs, and outcomes may vary significantly from one country, region, or community to another. Outputs and outcomes, for example, may involve combinations of affective and cognitive results, and group, as well as individual, effects.

Efficiency is typically seen by managers and planners as a requisite of institutions in order to maximize the use of, and to avoid the wastage of, human and other resources in the attainment of outputs and outcomes. (Such terms as "use" and "wastage" are, of course, subject to multiple interpretations.) In educational planning and economics of education, it is customary to distinguish between internal efficiency and external efficiency. Internal efficiency refers to the wise use of resources--getting the most output for the same input or getting the same output with a reduction of input. Measures of outputs, objectives, or targets are associated with costs of inputs and processes. Lockheed (1988) make a further distinction between internal efficiency and internal effectiveness. In her conceptualization, internal efficiency is equated to effectiveness/cost with the measure of output given in nonmonetary terms, and the measure of input given in monetary terms. Internal efficiency thus does not necessarily mean lower costs. Better ratios of outputs to inputs may even require larger unit costs. In Lockheed's scheme, internal effectiveness (not to be confused with effectiveness/cost) or "technical efficiency" describes the ratio of outputs to inputs, when both are measured in nonmonetary terms.

External efficiency relates input costs to outcomes, i.e., the longer term effects of education. Consistent with this logic, external effectiveness refers to the ratio of nonmonetary inputs to outcomes. Windham notes that for purposes of planning and implementing educational change: "... effectiveness or efficiency enhancement activities must be part of a scholastic process wherein the planner or administrator attempts to maximize the probability of increased effectiveness or efficiency based on: (1) the available information on inputs and their influence on process effects; (2) the probable relationships of process variables to the desired outputs and outcomes; and (3) the probable costs of reforms relative to the expected availability of resources" (10).

Equity³ is customarily defined in terms of opportunities, distribution, or consequences. Cobbe (1990) defines it succinctly: "By equity in education, we mean fairness between distinguishable groups in terms of access to, participation in, and achievement of the educational system." Thus, if the distribution, opportunities, or consequences are viewed as unfair,

“efficient” policies of education may need to be supplemented by other policies in order to achieve an adequate level of equity. As might be expected, persistent controversy may be found in many countries over the acceptable criteria against which equity should be judged and over specific social and educational programs developed to attain greater equity. Attempts in schools to address programmatic and assessment issues in terms of equity or to use legal tools to guarantee equal educational rights have often resulted in acrimonious debate. Even with agreement in principle, consensus of practice may not follow.

Although equity considerations may be aspects of a definition of quality educational programs, quality and equity at times have been viewed as conflictual. The choice is often phrased as “equity or excellence?” Such wording may imply that provisions of resources or other inputs and processes to support the latter should have priority over attempts at further developing a more equitable distribution of educational services and outputs. Learners vary in cultural and linguistic backgrounds, aptitudes, and abilities. Equity fundamentally implies that such differences are recognized and appropriate adaptations are made in educational practice. In a number of countries, the use of legal tools has been necessary to reduce practices interpreted to be educationally discriminatory. In the United States, for example, constitutional guarantees of equal rights, including educational rights, are now found in several states and specific state and federal funding has been forthcoming to ensure compliance.

The term “quality,” like efficiency and equity, has a number of uses. As a concept, quality has both descriptive and normative characteristics. Thus, quality may be an attribute or an intrinsic characteristic of an individual or organization, e.g., “a school is an organization which has teachers.” Quality may also refer to status or relative degree of worth, e.g., “schools A and B are good schools”; or “school A is a better school than B.” In the context of educational reform and innovation, most discussions of quality assume or imply a normative usage of the term.

Quality is often defined, synonymously with effectiveness, as the degree to which objectives are met or desired levels of accomplishment are achieved. Higher quality thus typically means a real or anticipated increase in effectiveness, that is, better or larger output, process, input, or outcome. Snyder (1990) personalizes quality: “Quality is a personal evaluation. Although it may be influenced by physical conditions and circumstances, quality entails feelings, attitudes, and values, and it is more than the sum of objective indicators.”

Clarifying the Multiple Definitions of Educational Quality

The conceptual confusion over the idea of educational quality comes through clearly in educational literature where redundancies and tautologies abound. The definitions offered frequently are on the order of “good quality programs are those which produce good results” or “high quality schooling is associated with excellence,” and thus are of little value for purposes of planning or evaluation. Many educators are probably sympathetic with Pirsig (1974), who noted in frustration: “. . . obviously some things are better than others . . . But what’s the ‘betterness’? . . . so round and round you go, spinning mental wheels and nowhere finding any place to get traction. What the hell is quality? What is it?”

At least six common views of quality appear to be given by educators: quality as reputation; quality as resources and inputs; quality as process; quality as content; quality as outputs and outcomes, and quality as “value added.” The application of the definition “quality as reputation” is probably most prevalent in assessment of higher educational institutions but not infrequent in evaluations of lower educational levels. Astin (1983) perhaps has reputation in mind when he argues that it is easy to reach consensus on the most excellent colleges and schools.

He concludes: "What . . . this suggests to me is that there exists in the minds of most people in this country [the United States] a folklore about which are the 'best' educational institutions in the country." The basis for reputation, although usually not fully clear, would seem to often include information or assumptions about inputs and outputs.

Quality as resources and other inputs has been a popular definition with professional bodies of accreditation and also is extensively reflected in the work of international agencies. Data on fiscal resources, number and education of teachers, extent of facilities, and even the social and learning histories of students are often more easily available than data on the consequences of education.

Quality as process suggests that not only inputs or results, but also the nature of the intra-institutional interaction of students, teachers, and other educators, or "quality of life" of the program, school, or system, is valued (WCEFA, 1990). Teachers usually include and sometimes emphasize the view of quality as process. There is the assumption that a judgment of quality need not await assessment of results, outputs and outcomes, but can be made from an examination of the judgment, pleasure, enthusiasm, or other interpretations of teachers and students. Process may itself be an objective, or the processes of interaction and student engagement may be seen only as proxies for the outputs sought.

Quality as content reflects the particular bias of a country, community, or institution toward some body of knowledge, skills, or information. To some extent, although many regional and community variations may be found throughout the world, a trend toward common educational content can be recognized in the movement toward an internationally recognized core curriculum at the earlier levels of schooling (consisting of the 3Rs, national language(s), and history). However, content is not an adequate synonym for curriculum. Curriculum (core or extended) may be conceived as a many faceted process of interaction involving a wide variety of cognitive, affective, and social activities in the search for meaning. Thus, in one conceptualization of curriculum, process and content may be seen as inseparable.

Quality considered as outputs or outcomes, in spite of measurement difficulties, is highly popular with policy makers. Typical measures of this definition of quality are achievement in cognitive skills, entrance ratios to next levels of education, income, and occupational status.

Quality may be interpreted as a measure of change. Quality as "value added" typically refers to the impacts, influence, or effects of the institution or system on the student; that is, how the student has changed because of the program, the culture, and the norms of the school. Education is sometimes said to "enlarge human capacities" or to help students to achieve their "potential." In principle, the change being examined could focus not only on the individual but also on social groups or institutions. The "value added" definition implies that the higher the quality of the education, the more the contribution to the knowledge, attitudes, values, and behavior of the students. Typically, the focus is on some assessment of student growth and development. Operationally, this definition combines output or outcome considerations with pertinent base line data on the student at the point of entry into the program or school.

Examples of quality defined as inputs, processes, outputs, outcomes, and value added are provided in Box 1. However, definitional statements of educational quality frequently include combinations of inputs, processes, contents, outputs, or their relationships. A trend in this direction can be found in the recent international research literature, and to a lesser extent, in international policy and planning documents. Box 2 provides examples which encompass elements of two or more of the six views of quality.

Box 1. Definitions of Educational Quality as Inputs, Processes, Outputs, Outcomes, and Value-Added

As Inputs

Academic (educational) program quality is best understood as a set of discrete dimensions, independently measuring faculty quality, student quality, size, resources, and overall prestige. Fairweather, J.S. & Brown, D.F. (1991). Academic program quality. *School Administrator*, 14 (2).

As Process

I mean by school regimen (whole school environment) the quality of living that seems to permeate the school. . . . The quality of living in the school not only reinforces the specific purposes of the school, but also more than anything else, seems to be the way by which the school can achieve the purpose it shares with other agencies/groups in the culture. Frymier, J. (ed.). (1983). Bad times, good schools. *Kappa Delta Pi*, 17.

As Outputs and Outcomes

Quality pertains also to how well the school or system prepares students to become responsible citizens and instills attitudes and values relevant to modern society (pp. 31-32).

Quality thus encompasses how well the education system does the job of accommodating modern market oriented skills to traditional, home-based values and needs (pp. 31-32). *Education in sub-saharan Africa: Policies for adjustment, revitalization and expansion*. (1989). A World Bank Policy Study.

UNESCO subscribes to the view that a good quality primary schooling and the provision of essential knowledge and skills for adults to cope with the diverse demands of a modern society should be available to all people. Education for all. (1990). *Bulletin of the UNESCO Principal Regional Office for Asia and the Pacific*.

We are defining quality simply as the acquisition level of output student knowledge and skills as measured by achievement examinations. *IEQ Project Paper* (936-5836). (1991). Office of Education. Bureau for Research and Development. USAID.

As Value-Added

The quality of an educational program can be adequately assessed only if one can determine the extent to which the program has directly contributed to the desired outcomes. This is called the value-added definition of quality. Bergquist, W.H. & Armstrong, J. (1986). *Planning effectively for educational quality*. Jossey Bass Publishers.

The quality of a school or an education program is defined in terms of the intrinsic nature and purpose of education to enlarge human capacities. Commonwealth Secretariat. (1991). *Improving the quality of basic education*, 4, London.

Box 2. Educational Quality as Some Combination of Inputs, Processes, Outputs, Outcomes, or Value-Added.

Ultimately, of course, the quality of an educational program will be defined by input, output, and value added measures assessed in desired outcomes, for their interrelationship with one another.

Bergquist, W. H. & Armstrong, J. (1986). *Planning effectively for educational quality*, 2. Jossey-Bass Publishers.

... The meaning of educational quality should be clarified. The term can be defined in two ways in terms of either inputs or outputs. In the first, the quality of education is linked to school inputs, such as teachers' qualifications, class size, teaching methods, pedagogical materials, and curriculum. Educational quality is said to be high when these inputs are considered good. In the second, educational quality is linked to the output of the system, regardless of its internal operation. Quality is considered high if exiting students achieve many of the curriculum objectives. Mingat, A. & Ping Tan, J. (1988). *Analytical tools for sector work in education*, 59. Washington, DC: The World Bank.

Quality of education can also be seen in the form of selected characteristics which are intrinsic to education, and to which we give a significant meaning as worthwhile goals to be realized, as standard of our education.

... The quality of education calling for good education is basically a claim for redefinition and redirection of educational practice as a whole

Quality of education: What art thou (November 1991), 5 & 16. Third SEAMEO INNOTECH International Conference. Philippines.

[Improving school quality is]. . . a systematic, sustained effort aimed at change in learning conditions and other related internal conditions in one or more schools, with the ultimate aim of accomplishing educational goals more effectively.

Bollen, R. (1989). *School improvement*, 10. Acco, Amersfoort (The Netherlands).

A basic quality education is a process which can enable students to transform their potential into actuality. *Basic quality education: An interim report* (1974). Helena: Montana State Department of Public Instruction.

Statements pertaining to ongoing educational reforms in Guatemala and Ghana, two of the countries with which the Improving Education Quality (IEQ) Project is involved, also reflect broad views of educational quality. The definition of quality in Guatemala emphasizes inputs and processes, particularly those associated with teaching, that are assumed to lead to higher student performance. Explicit consideration of equity and, in a limited way, costs are recognized as integral aspects in achieving quality. By including a partial critique of existing conditions, this detailed definition provides an assessment of constraints to qualitative change and sets certain initial criteria for raising quality.

Box 3. Definition of Quality - Guatemala

In Guatemala, educational quality has been defined as material inputs and non-material characteristics of schools which have been shown to improve student learning. Poor teaching is seen as the principal factor in poor student performance. Deficient supervision and staff development, isolation, poor teacher placement, lack of parental/community support, minimal teaching materials and supplies, and lack of achievement standards are among the problems cited as contributing to poor teaching and the resultant waste and inefficiency through student dropout and repetition. Thus, recent educational reform has focused on upgrading teachers' skills through improved in-service training and supervision to aid teachers to use existing resources more effectively, and on developing low cost materials to assist teachers in providing better instruction (interactive radio, multigrade teaching techniques, and instructional materials). Equity is of primary concern as many of the interventions being developed are aimed at those students who have traditionally had the least success in the Guatemalan primary school system—the rural poor, minority language populations, and girls. Internal memorandum prepared by IEQ Project staff (see Endnote #1).

The statements on educational quality in Ghana by Ghanaian educators (Box 4) reflect the recent history of extreme neglect of the education system. Quality in this context becomes associated with rebuilding as well as redesigning the whole educational enterprise. Higher levels of inputs, a revitalized, more interactive, learning environment, and specific, practical outputs useful in everyday life are all called for as basic building blocks for improved quality.

Box 4. Educational Quality in Ghana

Ghanaian educational standards declined in the early 1980s: many trained teachers migrated to other African countries; the government interest shifted away from education; we had no supervision and no inputs; the literacy skills of our school leavers were undeveloped. The system was grinding to a halt. Something had to be done.

In 1985, the World Bank supplied basic items for basic education. We directed our attention to the curriculum and integrated Ghanaian values and culture. We introduced courses to teach technical skills that related to socioeconomic needs and predisposed young people to avenues of employment.

Mrs. Camille Haldane-Lutterodt
Coordinator, PREP/Management Unit
Ministry of Education
Accra, Ghana

In the late '80s, the government began to put resources into the schools. We converted the middle schools to the junior secondary schools. We looked at ways to predispose our students to vocational skills. Schools offered crafts that were developed within the community. The teachers began to return. We are now phasing out all unqualified middle school teachers, those who failed to pass the O level examinations. Our priority is to teach students to read and write. I want our students to live a better life; to read the signs on the road; to go to the bank and sign their names; to be useful in the community; to be able to read a pamphlet that provides nutritional information; to know that it is critical to boil water before drinking; and to write your name and vote. Our focus is to train teachers who can help students learn. We're now taking a census to determine how many must leave so we can plan our training. Perhaps 14%.

Mrs. Sara Opong
Director of Basic Education
Ministry of Education

In reform, we stress creativity. We want students to be active and to ask questions. For example, we are adopting an integrated approach to teaching and learning. We want to create new learning environments. What is important to know and do in the life after school? We want our children to have confidence to do things for themselves and to have an inquiring mind. In our teacher training programs, we focus on the teacher as a facilitator. We want teachers to interact with students.

Dr. John Atta-Quason
Deputy Director-General
Ghana Education Service

Definitions collected by Dr. Jane Schubert, Director of IEQ Project (see Endnote #1)

Further Operationalization of the Concept of Educational Quality⁶

This brief review of the concept and the various definitions of educational quality suggests:

- Quality has multiple meanings.
- Quality may reflect individual values and interpretations.
- Quality is often multi-dimensional; it may subsume equity and efficiency concerns.
- Quality is dynamic; it changes over time and by context.
- Quality may be assessed by either quantitative or qualitative measures.
- Goals of quality may conflict with efficiency, equity, or other goals.
- The meaning of quality is grounded in values, cultures, and traditions; it may be specific to a given nation, province, community, school, parent, or individual student.
- Different stakeholding groups often have different definitions of quality. Thus, “winners” and “losers” may be associated with any particular definition.

It should be further noted that because of the characteristics identified above, comparisons of levels or degrees of educational quality are extremely difficult. Because educational programs and activities can be designed for many different purposes and interpreted in different ways, international, inter-community, inter-school, or even inter-classroom evaluations of quality may have little meaning.

It is frustrating, to be sure, to have to work with such a slippery idea, yet one need not necessarily become overwhelmed. A more optimistic list of characteristics of educational quality could include:

- Quality is definable in context.
- Under some assumptions it can be measured “objectively.”
- Quality often supplements, complements, or is integrated with interpretations of efficiency and equity.
- Quality is not necessarily associated with high costs.
- Given similar missions and goals and comparable contexts, educational quality can be evaluated across educational settings.
- Even if there is lack of agreement on what quality is, there often is agreement that it should be approved.

Considering this sample of characteristics, perhaps a useful general statement about defining quality can be fashioned. The specification of an operational definition, one useful in planning and implementing change, as opposed to the identification of a generic category, e.g., “quality as content,” is facilitated by:

- (1) a clear sense of direction(s), objective(s), and mission(s);
- (2) an understanding of the ethical and moral constraints in the process or path taken to attain the chosen definition of quality;
- (3) knowledge of the range of learnings that any given classroom, school, program, or system is and is not capable of fostering, e.g., can a school teach honesty?;

- (4) a user-friendly monitoring and accountability system of performance review which not only addresses the question “how are we doing?” but also asks why the particular information on quality is needed; and
- (5) a long term commitment to illuminate further the idea and full range of meanings and standards of quality.

It is not the purpose of this paper to analyze the professional or sociopolitical processes by which educational quality becomes conceptualized, operationalized, or “institutionalized.” A subsequent paper will discuss at length problems and strategies of improving or implementing qualitative educational change. However, following the guidelines above, introductory comments are made here regarding a few of the activities typically assumed to be necessary in order to move from isolated definitions of quality to a process of examining quality within the context of reform and innovation. In planned attempts at improving educational quality, three types of activities are usually viewed as unavoidable: implicit or explicit identification of objectives; acceptance of a descriptive model of high quality education; and development of qualitative or quantitative measures or indicators of educational quality. A brief discussion of each activity can illustrate the potential complexity of the tasks involved.

The bottom line of concerns for educational quality is typically the achievement of particular or shared objectives. Table 1 provides a few illustrative examples of the many possible educational objectives.

Table 1. Educational Quality Objectives

Student achievement
Equal access
Equal success
High student expectations and satisfaction
High parent expectations and satisfaction
Civic responsibility
Democratic decision making
Employability

Objectives evolve and change. Each objective may be viewed as an aspect of one or more explicit or implicit broader goals which in turn responds to a need or problem. An ongoing process of planning, including developing of “mission statements,” would be necessary before the objectives could be prioritized. A major problem could generate several goals, each of which could be linked to numerous objectives at various educational levels. In practice, the overarching goals may not exist and educators must work with explicit or implicit objectives at the school, program, or project level.

A few questions focussed on the objectives in Table 1 are suggestive of discussions, professional debates, and political battles which might be associated with selecting and operationalizing objectives. Development and utilization of measures or indicators for these objectives require answers to questions such as:

- To what extent is specification of objectives prior to initiating reform desirable or possible? How can differences in the educational objectives associated with various interest groups be reconciled?
- In terms of student achievement, for which student groups are the greatest gains sought? Or should the purpose be to maximize “achievement yield,” i.e., the most gain for the most students? Does achievement demand critical literacy and higher-order skills? Who decides which knowledge and skills are to be required of which students? What ethical principles are involved in the above choices?
- In what forums should questions be raised about ethnicity, gender, family, and cultural contexts pertaining to equality and equity?
- How realistic in terms of costs and human resources are attempts to determine and respond to student and parent expectations? Who has priority in terms of “satisfaction” — parents or teachers?
- Should objectives of civic responsibilities and democratic decision making support a critical examination of existing social and political institutions?
- Should employability meet criteria of meaningfulness or enjoyability?

For purposes of contributing to ongoing definition, evaluation, and fostering implementation in educational quality, a descriptive, qualitative model of the characteristics of high quality schools may be crucial (see Box 5). A profile of quality schooling may be seen as a necessary prerequisite, for example, to any attempt to specify acceptable curriculum, teaching methods, and management roles. The development of a localized profile of quality schooling could be an integral part of a broadly conceived, continuing community and school level dialogue on educational improvement. Again, however, the complexity of the task should not be underestimated. For example: Are the only purposes of such a “model” to initiate and extend discourse? Does educational science warrant reliance on such a “profile” for purposes of setting targets and allocating resources? Can priorities be established between these conditions and processes? Can costs be determined for each characteristic? Does experience suggest which are the most cost/effective? Does the sequence in which the elements of content, process, and management are achieved matter?

Establishing educational objectives and identifying characteristics of quality programs and schools are important if not unavoidable activities in the operationalization of and planning for change in educational quality. Additionally, and equally unavoidable in monitoring, evaluating, and effecting change are collective judgments, sets of measurable indicators or checklists of educational conditions or accomplishments. Analysis of educational indicator systems is well beyond the scope of this paper; however, a few observations can be offered.

Box 5. Integrated Profile of Quality Schooling

Content and Process

- Classroom culture recognizing gender, class, and ethnic differences and the individuality of each student
- Availability of textbooks and supplementary reading materials
- Systematic and logical sequences in teaching
- An orderly, safe, healthy, environment
- Clear instructional objectives
- Maximization of time on task
- Regular homework
- Training in problem solving and higher order reasoning skills
- High achievement expectations clearly communicated
- Use of interactive radio instruction and other low cost technologies when necessary
- Classroom climate emphasizing active learning
- Regular monitoring of learning and feedback on all practice
- Emphasis on independent learning

School Management

- Knowledge of education quality research
- Commitment to educational quality
- Commitment to development of school climate which emphasizes achievement and encourages high expectations
- Commitment to provision of adequate facilities
- Assistance in the evaluation and professional growth of teachers
- Effective interaction with educational bureaucracy
- Commitment to implementing change as well as maintaining stability
- Commitment to both accountability and capacity building
- Acceptance of role as instructional leader
- Recognition of the unique styles and needs of teachers
- Provision of regular local in-service training for teachers
- Expectation of, and competence to cope with, unintended consequences
- Development of cooperative school-community relations

If educational efficiency, equity, and quality are distinct concepts and each has input, process and output components then a neat 3 x 3 classification would allow for meaningful identification and comparisons of distinct measures. Such does not appear to be possible. More promising are efforts to develop sets of indicators of either the notions of educational inputs, process and outputs or of educational efficiency, equity, and quality in educational practice. Yet

any attempt at such operational distinctions is constrained since quality may subsume dimensions of equity and efficiency. That is, objectives and targets of equity and efficiency may be integral to measures of quality. Most proposed sets of indicators focussed on educational quality exhibit severe limitations. The creative work of Horn (1992),⁷ for example, useful as it can be for some planning purposes, points out many of the potential pitfalls. Horn argues the need for, and provides a prototype of, a checklist designed “to assess whether a school is providing the fundamental prerequisites for student learning to take place.” The particular criteria for an assessment of what he refers to as fundamental quality level (FQL) should be developed in each country. However, Horn provides illustrative examples:

Example Criteria for Defining FQL: Quality-Related Process

- a) Reports prepared by school inspectors or circuit officials indicated that classroom teachers report to school daily, and that head teachers or their deputies visit and observe in every classroom at least once per day;
- b) District reports indicate that a district or higher-level inspector observes in the school at least twice each year.

Example Criteria for Defining FQL: Quality-Related Outcomes

- a) Over 75% of primary 1 entrants complete primary 6;
- b) At least 80% of primary 6 students attain specific performance standards in the areas of literacy and numeracy as measured by a criterion referenced assessment.

Example Criteria for Defining FQL: Pedagogic-Related Inputs

- a) There should be between 30 to 45 students per classroom and per teacher;
- b) At least one complete set of “approved” language and mathematics textbooks is available for the use of every three students (distributed to the pupils).

It may well be possible through checklists and easily quantifiable indicators to provide guidance to administrators, teachers, and communities on some of the basic requisites for schooling, e.g., adequate facilities, and useful instructional materials. Such efforts are generally better seen, however, as providing initial and ongoing information more useful for informing a process of discussion and debate rather than constituting an exercise of formal assessment.

In summary, a cursory examination of the FQL and similar attempts suggests the following limitations:

- Indicators to be part of valid decisions must evolve from an acceptable theoretical framework.
- Neither the FQL nor the profile of Educational Quality (Box 5) recognize the potentially important role of politics in choosing and rejecting indicators.

- National indicators or definitions of quality are unlikely to be adequate for planning at the subnational levels.
- Consensus among educators on cut-off levels of indicators is unlikely.
- As a bureaucratic tool such indicators may be used uncritically for assessment and subsequent “reward” or “punishment.”
- Highly specific targets risk limiting achievement to those standards.

Many of the same criticisms could extend to any attempt to associate measures with the illustrative objectives of educational quality in Table 1. Measures of the achievement of any of the objectives have technical limitations and are subject to political and professional controversy. Probably no set of quantitative or qualitative measures captures the full range of objectives of citizens, teachers, and students. Thus, the questions “who develops the technology of measurement?” and, “for whom is a given measure satisfactory?” may become issues of intense debate.

In principle, and if available research tools were sophisticated enough, it would be possible to construct, for each educational setting at any particular time, a matrix pairing actors (teacher, parent, student, administrator, policy maker, etc.) with one or more definitions of quality. Further, one could associate each definition with one or more quantitative or qualitative measures. The measures, in turn, could be linked in a three-fold classification of normative, criterion, and “connoisseurship” standards. But, of course, even if these efforts were possible, the uncertainties inevitably associated with multiple interpretations of data and meaning throughout such a process could not be avoided.

Any given definition of quality may be subject to criticism and possible rejection by those who have different expectations or understandings of the purposes and capabilities of educational institutions. The use of such concepts as inputs, outputs, and outcomes, although convenient and useful up to a point, is far from being fully satisfactory. If such rhetoric suggests high quality education can be described merely by a compilation of discrete conditions and results, it is surely inadequate to capture either the organizational complexity of schools or the potential dynamism of their interaction with the community and larger social environment. Manipulation of certain identifiable and fixed skills and behavior of students and teachers may well increase certain output measures. However, should a community’s definition of quality imply, for example, the learning of democratic practices or performing critical analyses or organizing for popular action, then merely increasing the resources, extending the school year, or even making more instructional materials available will not achieve the desired results. Nor, for that matter, are the desired results likely to be discovered by scores on standardized tests.

Summary

The ongoing international attention to educational quality has shifted the focus of educational debates and reforms away from educational growth to discovery of those combinations of inputs, processes, and outputs which are assumed to define or cohere to improved types of education. This refocus has raised many questions and has also heightened awareness of the complexities and uncertainties surrounding schooling and its interchanges with its environment. By acknowledging the difficulties in defining educational quality while insisting on the need for educational improvements, citizens and governments have created new challenges for educators.

This paper has attempted to clarify the concept of educational quality, provided an illustrative range of definitions, and suggested some of the difficulties in operationalizing the notion of quality for purposes of assessment and planning. The complexity and dynamic characteristics of educational quality, and its changing contextual characteristics, have been emphasized. Defining quality ultimately becomes linked to the diversity, conflicts, and power

divisions within society. Full consensus on the specifics of educational quality is unlikely to ever be reached in heterogeneous societies, but such agreement is not necessary for initiating change and improvement. What may be a more crucial task for educators, parents, and citizens is the development in schools and in communities of a growing capacity for and commitment to ongoing definition, redefinition, and improvement of quality.

ENDNOTES

1. This paper was prepared with support of the Improving Educational Quality Project (IEQ), Institute for International Research, USAID. The IEQ project is designed to link classroom research to improved classroom practices in selected developing countries. Appreciation is expressed for the helpful comments from Mark Ginsburg, Leo Klopfer, Jane Schubert, Steve Anzalone, and Ray Chesterfield.

2. Also see: B. Fuller, Defining school quality. In J. Hannenay & M. Lockhead, *The contribution of the social sciences to educational policy and practice 1965-1985* (pp. 32-27). Berkeley, CA: McCutchan; Organization for Economic Co-operation and Development. (1989). *Schools and quality: An international report*. Paris: OECD; Lockhead, M. & Verspoor, A. (1990). *Improving primary education in developing countries: A review of policy options*. Washington, DC: The World Bank; Ross, K. & Mahlck, L. (Eds.). (1990). *Planning the quality of education: The collection and use of data for informed decision-making*. Paris: IIEP/UNESCO with Pergamon Press; Hawes, H. & Stephens, D. (1990). *Questions of quality: Primary education and development*. London: Longman; Bender, L. (1983). *Differences and implications of legislator and educator perceptions of quality education*. Paper presented at the 54th Annual Convention of California Association of Community Colleges. Sacramento, CA, November 18-20, 1983; Hansen, K. (1979). *Defining quality education: An analysis of state educational policy options*. Prepared for chief state school officers of the Northwest and Pacific; Kwak, B. (1991, November). *Quality education: What art thou?* A paper presented at the Third SEAMEO INNOTECH International Conference. Manila, Philippines.

3. A thorough understanding of the sophisticated and subtle ideas of quality and equity obviously require a much more extensive examination than they are given here. For one formal analysis of the "best" and "equal" principles applied to education the reader may refer to: T. Green, *Predicting the behaviour of the educational system*, Syracuse, Syracuse University Press, 1980. Chapter 7. Green's provocative definition of "best" is "... the education that the rich provide for their sons" (p. 120). Yet he also argues that the claim that the two principles are jointly satisfied under the conditions that constitute realization of the best principle is spurious. He concludes: "... what we seek in the system is some balance between these two principles without the sacrifice of either. What is sought is (1) the provision of the best education for each, so that (2) what is provided for some is not significantly different from what is provided to all others. The equal principle expresses the demand for an education for each that is the same as that provided for all others" (p. 133).

4. This confusion of meaning appears to extend to fields other than education and use of the term in the world of business seems incrementally less problematic. A publication of the American Management Association, concludes: "Customers aren't interested in our specs. They're interested in if the answer is yes, then it's a quality product. If the answer is no, then it isn't. . . . Quality is conformance to requirements" (AMA. *A modern fable about quality* (p. 9). San Francisco: Jossey Bass). This is clearly a rejection of input definitions of quality in favor of an emphasis on outcomes. Even so, one wonders if any organization can be constrained only by views of "customers" in defining quality.

5. See also Bogus, E. (1992). *The evidence of quality: Strengthening the tests of academic and administrative effectiveness*. San Francisco: Jossey Bass; Richardson, R. C. & Skinner, E. F. (1991). *Achieving quality and diversity*. New York: Macmillan.

6. The most common approach to assessing educational quality involves some measure of student achievement (at the primary school level often in the area of "basic skills"). Although many teachers and other educators would probably find reliance only on a measure of cognitive skills or familiarity with a particular body of information an inadequate way to judge quality, researchers have found achievement test scores convenient for purposes of comparison of programs, schools, and school systems. Restricting the definition of quality of student achievement and the increasing use of standardized tests internationally—a trend frequently encouraged by national and international agencies—warrants scrutiny and critique not possible here. Suffice to say that this trend is not without its critics. Because of the conditions

sometimes accompanying national testing, (e.g., the narrowing of educational interests, the potential for socioeconomic, racial, or gender bias, the inevitable association of quality with the characteristics of entering students, the intrusion of bureaucratic agencies), many educators fear that any national movement to assess student achievement will be detrimental to the achievement of many valued educational objectives.

7. Also see Samah, A. A. (1991). *Effective indicators of quality education*. SEAMEO INNOTECH International Conference. Manila, Philippines; OECD. (1991) *OECD International education indicators: Outcomes of education*. Paris; Finn, C.E. Jr. (1989). *What good are international indicators anyway?* Paper prepared for the Indicators Panel Study Group, Washington, DC; NCES; Oakes, J. (1990). *Education indicators: A guide for policymakers*. Santa Monica: RAND Corporation, CPRE.

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FACTORS THAT INFLUENCE THE INSTRUCTIONAL PLANNING OF TEACHERS

Daniel J. Egeler

Most educators adhere to the belief that to teach successfully one must plan successfully. On the strength of this conviction, planning is built into the job description for most teachers. Teachers are usually allocated a daily planning period; certain days during the contract period are frequently set aside as planning days; and teachers' plans are frequently required by many principals and then monitored by collecting them on a weekly or monthly basis (Borko & Niles, 1987).

Many teachers can look back to their undergraduate education and recall the effort put into carefully constructing detailed lesson plans for classroom instruction. These plans typically followed the steps proposed by Tyler's (1950) objectives-first or rational model. The model described planning as a four-step process: (1) specifying behavioral objectives, (2) choosing appropriate learning activities, (3) organizing and sequencing the chosen activities, and (4) selecting evaluation procedures. Indeed, the model has been advocated for use by teachers of all levels and all subject-matter areas and has been taught to preservice teachers over the past three decades (Borko & Shavelson, 1990).

In attempting to explain how teachers plan, several studies examined the parts of instruction teachers consider when planning and the order in which they consider these components. These studies explored aspects of planning such as decisions typically made prior to teaching (Zahorik, 1975), and planning for specific lessons prepared by the researcher (Morine-Dershimer & Vallance, 1976; Peterson, Marx, & Clark, 1978).

Though a variety of methods were used to gather data, a consistent pattern emerged from the studies. The research-based descriptions of teacher planning differed from Tyler's model in both the relative prominence of the four planning steps and the sequence in which they occurred. Objectives were not found to be a particularly important component of the planning process, and they were seldom the starting point for the process (Borko & Shavelson, 1990). In fact, some teachers reported that they did not actually write down objectives unless they were required to do so. Objectives were implied in the activities and were listed in the teachers' textbooks, so to write them down was seen as a waste of time (Borko & Niles, 1987; Egeler, 1992; Sardo-Brown, 1990).

Rather than objectives or evaluation, planning seems to focus on content and activities (Borko, Livingstone, & Shavelson, 1990). The first planning decision made by teachers usually involves the subject matter. Teachers typically identify the subject matter to be covered and an activity to be used and then consider other components such as materials, goals, objectives, and evaluation (Berliner, 1990; Borko & Niles, 1987; Clark & Peterson, 1986; Egeler, 1992; McLeod, 1981).

As a result of the research findings, investigators have turned to different models of teacher planning to provide a better explanation of the process (Clark & Yinger, 1979; Leinhardt, 1983; Yinger, 1980). Clark and Yinger (1979) proposed a cyclical model to describe the planning process undertaken when teachers prepare a unit of material for instruction. The teachers began with a general idea and continued through phases of elaboration and modification.

Yinger (1980) embellished the cyclical model by applying it to the planning of daily and weekly instructional activities. This began with a problem finding stage where the teacher would conceptualize the planning task. The next stage entailed problem formulation and solution with the teacher designing instructional activities by repeatedly cycling through a process of elaboration, investigation (mental testing), and adaptation. The third stage consisted of implementation and evaluation of the activities in the actual classroom setting.

In a third model of planning, Leinhardt (1983) assumed that teachers' planning was governed by an implicit set of mental scripts or thought patterns for instruction. Leinhardt hypothesized that because the mental scripts were so well rehearsed, teachers have little need to elaborate on them during planning. Consequently, teachers concentrate on forming agendas during planning and focusing on the scheduling of goals, content, and activities.

Another area of interest to researchers was the investigation of why teachers plan. Not surprisingly, the findings were that teachers plan for many reasons. To a large extent, however, teachers plan for internal reasons primarily (Borko, Livingstone, & Shavelson, 1990; Egeler, 1992). Clark and Yinger (1979) found three clusters of internal motivations: (1) to meet immediate psychological needs, (2) to prepare themselves for instruction, and (3) to guide the interactive processes of instruction. McCutcheon's (1980) study of elementary school teachers reported similar findings as teachers plan to feel more confident about teaching content, to learn the subject matter better, to help the lesson run more smoothly, and to envision and circumvent potential problems. In addition, she also reported two external reasons for planning: (1) to meet their principal's requirements, and (2) to provide guidance for substitute teachers.

Researchers also have explored the factors that influence the planning decisions that teachers make. As has been noted, research-based descriptions characterize teacher planning as a process of selecting instructional activities, strategies, and techniques. Teachers have many instructional tools at their disposal and they select and elaborate on these with the intent of achieving some objective (Borko & Shavelson, 1990). In the process of making these selections, a number of factors influence the decisions that teachers make: information about their students, the nature of the instructional task, their own personal characteristics, and institutional constraints (Borko & Niles, 1982, 1983; Clark & Elmore, 1981; Florio, 1979; McCutcheon, 1980; Morine-Dershimer, 1976; Mintz, 1979; Sardo-Brown, 1988; Shavelson & Stern, 1981).

A final area of interest to investigators has been the differences between the planning of experienced teachers and novice teachers (Borko, Livingstone, & Shavelson, 1990). These differences are in both the nature of the plans and the planning process. Experienced teachers' plans typically are more detailed than the plans of novices, include more information about instructional strategies and activities, and contain a greater number of instructional and management routines (Housner & Griffey, 1985; Leinhardt & Smith, 1985; Warner, 1987).

Two apparent limitations of research on teacher planning are evident in the literature. First, most investigations have been conducted primarily in elementary schools and in middle schools to the exclusion of secondary schools. Second, the important questions about what factors teachers take into account when making instructional decisions during planning have not been thoroughly explored. This study addressed these limitations by describing the factors that contribute to the instructional planning decisions of public Alabama secondary school (9-12) teachers.

Finally, this study provides significant information to those involved in the preparation of secondary school teachers. The knowledge of the planning practices of the "real world" of secondary school teachers should provide help in the instruction of teacher planning for novice teachers. As Clark (1988) maintained, "we have teacher educators who have learned a bit about research on teacher thinking, who have experienced the felt sense that something ought to be

done with this work, and who have begun to think about their teaching of novices in light of new descriptions of the way teaching is . . . these are the leaders and risk takers in teacher education to whom research on teacher thinking can be most useful” (p. 6).

The specific objectives of this study are included in the following research questions:

1. What are the factors derived from the Teacher Planning Questionnaire (TPQ) that contribute to the instructional planning decisions of Alabama public secondary school teachers?
2. What is the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contribute to the instructional planning decisions and the teaching experience of Alabama public secondary school teachers?
3. What is the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contribute to the instructional planning decisions and the level of education of Alabama public secondary school teachers?
4. What is the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contribute to the instructional planning decisions and the gender of Alabama public secondary school teachers?
5. What is the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contribute to the instructional planning decisions and the ethnicity of Alabama public secondary school teachers?

Methodology

The population for the study was 11,225 public secondary school teachers in the State of Alabama. Because the size of the population was between the range of 10,000 and 15,000, the sample size was established as 390 secondary school teachers (Krejcie & Morgan, 1970). The sampling plan was a stratified random sample generated from the database of the Computer Service Office of the Alabama State Department of Education. The sample was stratified into three clusters of 130 teachers according to their level of experience. The first cluster contained 130 teachers with 0 to 3.9 years of teaching experience; the second cluster contained 130 teachers with 4 to 10.9 years of teaching experience; and the final cluster contained 130 teachers with 11 or more years of teaching experience.

The instrument used in the data collection was a questionnaire developed for an investigation of the factors that influence teachers’ instructional planning. The division of the questionnaire comprised two parts: Part I contained questions designed to collect demographic information concerning the teacher (see Appendix A). Part II of the instrument contained the Teacher Planning Questionnaire (TPQ) which consisted of 22 Likert-type items to elicit responses concerning the factors that influence teachers’ instructional planning (see Appendix B).

The Teacher Planning Questionnaire (TPQ) was based on a scale developed by Sardo-Brown (1988) for the investigation of the factors that influence the instructional planning of teachers. The scale developed by Sardo-Brown (1988) included 24 items, and 2 items were deleted during the process of establishing content validity for this investigation. The 22 items were scored from 1 (very often) to 5 (never) by the teachers as to their influence on instructional planning decisions.

A pilot study was conducted to validate the survey instrument. Sixty-two secondary school teachers who were not a part of the sample of 390 teachers were asked to respond to the questionnaire and the results were used to establish reliability and validity. An odd-even split-half reliability estimate of .88 was obtained using the Pearson Product-Moment correlation

between the halves and modified with the Spearman-Brown formula. In addition, a panel of secondary school teachers, principals, and professors specializing in education were consulted to verify the content validity of the instrument. This panel lent expertise to the establishment of the content validity with their experience in planning for instruction or supervising teachers who plan for instruction. The result of the reliability estimate, item analysis, and the advice of the panel of experts were used to revise the instrument. Two items relating to fulfilling state objectives and performing well on standardized tests were deleted from Sardo-Brown's (1988) original instrument due to redundancy. The data generated from the instrument validation also were used to conduct a pilot test of the data analysis procedures.

A copy of the survey instrument, a cover letter, and a stamped, self-addressed envelope were included in the initial mailing to each of the 390 secondary school teachers selected for the study. After two weeks, the researcher mailed a post card to all non-respondents. After an additional two weeks, another questionnaire, updated cover letter, and a stamped, self-addressed envelope were mailed to all non-respondents.

Results and Discussion

Two hundred and seventy-nine of a possible 390 Alabama secondary public school teachers returned surveys for a return rate of 71.5%. Five of the returns were incomplete so the 274 completed instruments comprised the sample used for data analysis, making the usable return rate 70.2%. Over one third of the respondents had fewer than 16 hours of graduate credit (36.4%) and more than 11 years of teaching experience (45.9%). More females (59.1%) than males (38.3%) responded and more whites (86.1%) than African Americans (12%) responded.

The purpose of the study was to describe the factors that influence the instructional planning decisions of Alabama secondary public school (9-12) teachers. To lay the foundation for the accomplishment of this purpose, the first research question of the study asked what factors from the Teacher Planning Questionnaire (TPQ) contributed to the instructional planning decisions of Alabama public secondary school teachers. A Principal Components Analysis was conducted to determine if there was any relationship among the individual 22 Likert-type items. The factors selected and used for data analysis were determined by including those with eigenvalues greater than 1.0 and Cattell's (1966) scree test. Table 1 (all tables are located in Appendix A) illustrates the eigenvalues for those factors with values greater than 1.0 (Factors I through V) and Factor VI which had an eigenvalue of 0.97. Factor VI was included by using the criteria established by Cattell's (1966) scree test. Figure 1 provides a graph of the eigenvalue for each factor on the Y axis and the factor numbers on the X axis. The shape of the resulting curve was employed to judge the cut-off point for the number of factors used for data analysis. The curve began to lose its shape and assumed a linear shape after Factor VI (see Figure 1), which included this factor and supported a six factor solution. The researcher also explored the solutions for three, four, five, and six factor analyses to ascertain the most appropriate solution for this investigation. In the opinion of the investigator, the six factor solution made the most intuitive sense in explaining the pattern of the data.

With the establishment of a six factor solution, the researcher assumed the task of ascertaining which of the 22 items from the Teacher Planning Questionnaire (TPQ) defined the six factors. This was done by conducting an orthonormal rotation to determine the significant loadings for the six factors on each of the 22 items from the TPQ. From this rotated factor solution and its significant loadings, the appropriate clustering of items with their corresponding factors was determined.

Figure 1

Graph of the Scree Test for the Eigenvalues of Factors that Influence the Instructional Planning Decisions of Secondary School Teachers

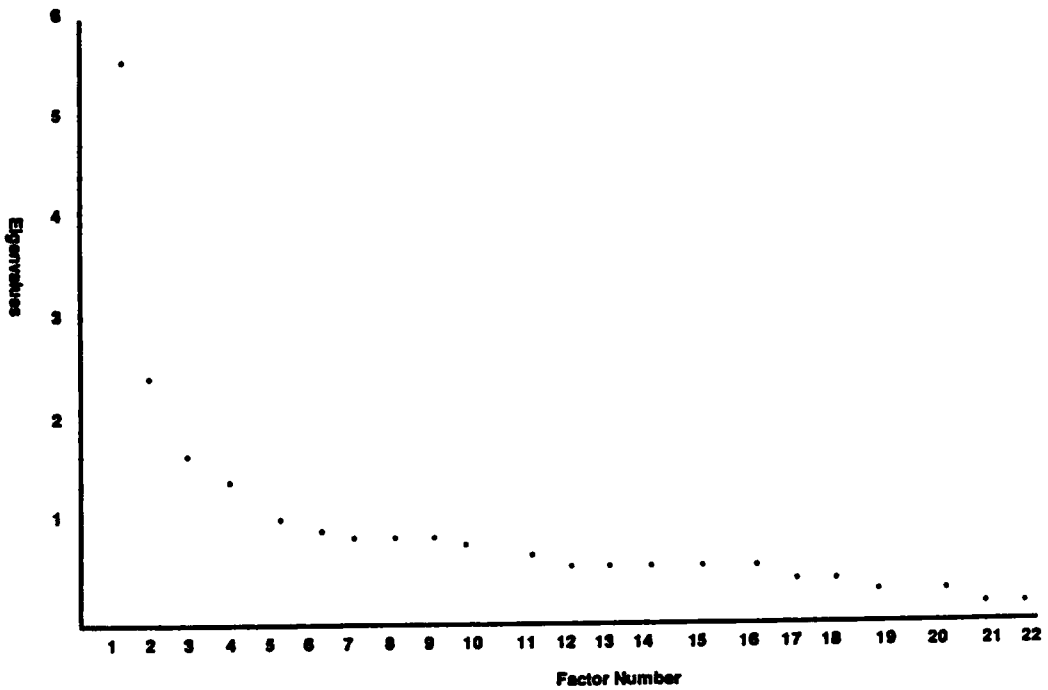


Table 1 outlines all of the selected significant loadings in bold for the six factors. Four significant loadings comprise Factor I. Factor II is made up of six significant loadings. Factor III is composed of seven significant loadings. Factor IV is composed of two significant loadings. Factor V is comprised of two significant loadings, and Factor VI contains one significant loading.

The criteria for the selection of the significant factor loadings were those loadings that scored at least 0.30. To support this approach, Child (1978) stated that “researchers often take 0.30 for the purposes of their main factor interpretations . . . and this is quite a rigorous level so we are not taking too much for granted” (p. 45). In the cases in which there were several loadings greater than 0.30, the researcher selected the loading with the greatest value or the loading that best supported the overall pattern of the data. This selection process took place in the cases of question items 2, 5, 6, 7, 12, 15, 16, 19, and 21. In the case of item 19 (avoiding interruptions during class), the highest significant loading of 0.51 for Factor IV (Textbook Influence) was not selected as this item fit better with Factor V (Classroom Management Experience) and its significant loading of 0.32. Item 19 (avoiding interruptions during class) more closely corresponded with item 20 (doing what one’s previous teaching experience indicated) rather than with item 10 (following the teacher’s manual) and item 22 (following the textbook).

The Teacher Planning Questionnaire (TPQ) items that comprised Factor I (District and State Guidelines) included meeting district objectives, fulfilling district curriculum grade requirements, fulfilling state curriculum guides, and fulfilling state competencies. The questionnaire items grouped under Factor II (Facilitating Student Learning) included maintaining student attention, achieving the lesson goals, having students perform well on unit tests, planning according to one’s personal beliefs about instruction, maintaining an orderly transition between activities, and facilitating student learning. Factor III consisted of the questionnaire items that included inservice training, satisfying parental expectations, meeting one’s department chair’s requirements, incorporating suggestions from other teachers, implementing what one learned in professional journals, satisfying team teaching requirements, and satisfying principal’s requirements. The questionnaire items grouped under Factor IV included following the teacher’s manual and following the textbook. The questionnaire items grouped under Factor V included avoiding interruptions during class and doing what one’s previous teaching experience indicated and Factor VI included undergraduate teacher education.

Research Question 2 focused on the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contributed to the instructional planning decisions and the level of teaching experience of Alabama public secondary school teachers. On the basis of the factor analysis conducted to answer the first research question, the following Null Hypothesis 1 was tested at the .05 level of significance to answer Research Question 2: there is no significant difference among the group means of the level of teaching experience on the six factors derived from the Teacher Planning Questionnaire (TPQ). Null Hypothesis 1 was tested using Analysis of Variance and was rejected at the .05 level. A significant difference was noted on Factor II (Facilitating Student Learning) between the levels of teaching experience with a $P > F$ of .0017 (see Table 2).

A follow-up procedure was conducted with Tukey’s Studentized Range (HSD) Test for the differences between the means on Factor II (Facilitating Student Learning) (see Table 3). A significant difference was noted for Factor II (Facilitating Student Learning) between those teachers with 11 or more years of teaching experience (Group 3) and those with fewer than 4 years of teaching experience (Group 1). There was also a significant difference between those teachers with 4 to 10.9 years of teaching experience (Group 2) and those with fewer than 4 years of teaching experience (Group 1). The significant differences between the group means led to

the conclusion that teachers with fewer than 4 years of teaching experience (Group 1) were less influenced by Factor II (Facilitating Student Learning) than teachers with 4 to 10.9 years of teaching experience (Group 2) and teachers with 11 or more years of teaching experience (Group 3).

Factor II was composed of those items that concerned Facilitating Student Learning such as maintaining student attention, achieving the lesson goals, having students perform well on unit tests, planning according to personal beliefs about instruction, maintaining an orderly transition between activities, and facilitating student learning. The difference between the group means for Factor II for the experienced teachers (Group 2) and inexperienced teachers (Group 1) was -1.64, and the difference between the group means for Factor II for the very experienced teachers (Group 3) and inexperienced teachers (Group 1) was -1.55 (see Table 3). This indicated that the mean group responses to the items contained in Factor II by experienced and very experienced teachers were lower than those of the inexperienced teacher group. Therefore, experienced and very experienced teachers were more influenced by the factor of Facilitating Student Learning (Factor II) than inexperienced teachers when planning for instruction.

This statistically significant finding has support in the related literature as experienced teachers' plans typically are more detailed than novices' plans, include more information about instructional strategies and activities, and contain a greater number of instructional and management routines geared toward facilitating student learning (Housner & Griffey, 1985; Leinhardt, 1989; Warner, 1987). Housner and Griffey (1985) compared the planning and interactive decision making of experienced physical education teachers and preservice teachers. Experienced teachers in this study made over twice as many planning decisions about strategies for implementing instructional activities. They also made twice as many contingency plans for potential problem situations. A recent case study of a first-year teacher suggested that novices may not plan for management concerns or potential problem situations because the context they encounter in student teaching is already routinized and rule-bound (Bullough, 1987).

Research Question 3 focused on the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contributed to the instructional planning decisions and the level of education of Alabama public secondary school teachers. On the basis of the factor analysis conducted to answer the first research question, the following Null Hypothesis 2 was tested at the .05 level of significance to answer Research Question 3: there is no significant difference among the group means of the level of education on the six factors derived from the Teacher Planning Questionnaire (TPQ). Null Hypothesis 2 was tested using an Analysis of Variance the results of which failed to reject the hypothesis at the .05 level (see Table 4).

Research Question 4 focused on the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contributed to the instructional planning decisions and the gender of Alabama public secondary school teachers. On the basis of the factor analysis conducted to answer the first research question, the following Null Hypothesis 3 was tested at the .05 level of significance to answer Research Question 4: there is no significant difference among the group means of gender on the six factors derived from the Teacher Planning Questionnaire (TPQ). Null Hypothesis 3 was tested using a t test and was rejected at the .05 level. A significant difference was noted on Factor II (Facilitating Student Learning) between the male and female group means with a $P > |T|$ of .0002 (see Table 5). The female teachers in this investigation scored the items comprising Factor II (Facilitating Student Learning) significantly lower (10.01) than the male teachers (11.42). There is no similar finding reported in the related literature as this facet of teacher planning has not been explored. This would be a fertile area for further investigation.

The final research question concerned the relationship between the factors from the Teacher Planning Questionnaire (TPQ) that contributed to the instructional planning decisions and the ethnicity of Alabama public secondary school teachers. On the basis of the factor analysis conducted to answer the first research question, the following Null Hypothesis 4 was tested at the .05 level of significance to answer Research Question 5: there is no significant difference among the group means of ethnicity on the six factors derived from the Teacher Planning Questionnaire (TPQ). Null Hypothesis 4 was tested using a t test and was rejected at the .05 level. A significant difference was noted on Factors II (Facilitating Student Learning—Pr > |T| of .0419), III (Professional Expectations or Requirements—Pr > |T| of .0006), IV (Textbook Influence—Pr > |T| of .0004), and V (Classroom Management Experience—Pr > |T| of .0036) between the White and African American group means (see Table 6). The first finding was that the group mean for African American teachers (9.57) was lower than that of White teachers (10.72) when comparing responses comprising Factor II (see Table 6). African American teachers also scored lower (17.43) than White teachers (20.53) when comparing the group means for Factor III (see Table 6). The comparison of group means between African American and White teachers for Factor IV revealed that African Americans scored lower (4.46) than Whites (5.61). The final significant finding was that the group mean for African American teachers (2.34) was lower than that of White teachers (2.92) when comparing responses comprising Factor V (see Table 6). Similar to the gender finding, there is no comparable result reported in the related literature in regards to the differences in ethnicity and how factors influence their instructional planning decisions. This would be another fertile area for further investigation.

Conclusions and Implications

The purpose of the study was to investigate the factors that contribute to the instructional planning decisions of public Alabama secondary school (9-12) teachers. The conclusions drawn from the data to accomplish the purpose were ascertained through the analysis of the ranking of the means for the responses to the items comprising the Teacher Planning Questionnaire (TPQ) and the answering of the research questions through the testing of the appropriate null hypotheses.

As the researcher addressed the research questions in this investigation, there were several conclusions drawn. The first research question of the study asked what factors contributed to the instructional planning decisions of Alabama public secondary school teachers. With the investigation of the individual items of the Teacher Planning Questionnaire (TPQ) by factor analysis, there were six factors that teachers considered when planning for instruction. These factors were District and State Guidelines (Factor I), Facilitating Student Learning (Factor II), Professional Expectations or Requirements (Factor III), Textbook Influence (Factor IV), Classroom Management Experience (Factor V), and Undergraduate Teacher Education (Factor VI).

The second research question of the study focused on the relationship between the factors that contributed to the instructional planning decisions and the level of teaching experience of Alabama public secondary school teachers. Through the testing of Null Hypothesis 1, the investigator concluded that experienced and very experienced teachers were influenced more by the factor of facilitating student learning (Factor II) than inexperienced teachers when planning for instruction. This statistically significant finding had support in the related literature as experienced teachers' plans typically were more detailed than novices' plans, included more information about instructional strategies and activities, and contained a greater number of instructional and management routines geared toward facilitating student learning (Housner & Griffey, 1985; Leinhardt, 1989; Warner, 1987).

The third research question focused on the relationship between the factors that contributed to the instructional planning decisions and the level of education of Alabama public secondary school teachers. With the failure to reject Null Hypothesis 2, the conclusion was that there was no significant difference among the group means of the level of education on the six factors derived from the Teacher Planning Questionnaire (TPQ).

The fourth research question focused on the relationship between the factors that contributed to the instructional planning decisions and the gender of Alabama public secondary school teachers. With the testing of Null Hypothesis 3, the researcher concluded that female Alabama public secondary school teachers were more influenced by facilitating student learning (Factor II) than male teachers when planning for instruction. As there is no similar finding reported in the related literature, this was related as a fertile area for further investigation.

The final research question concerned the relationship between the factors that contributed to the instructional planning decisions and the ethnicity of Alabama public secondary school teachers. With the testing of Null Hypothesis 4, the investigator concluded that the African American teachers in this study were more influenced by Factor II (Facilitating Student Learning), Factor III (Professional Expectations or Requirements), Factor IV (Text-book Influences), and Factor V (Classroom Management Experience) when planning for instruction than the White teachers. As there is no similar result reported in the related literature, this was reported as another fruitful area for further investigation.

The finding that experienced and very experienced teachers were influenced more by the factor of Facilitating Student Learning (Factor II) than inexperienced teachers when planning for instruction leads to implications for three parties. First, this finding has implications for instructional leaders as they strive to improve the professional development of the teachers that they supervise. The implication would be that these leaders should develop and implement strategies toward developing the ability of their faculty to include facilitating student learning as one of the focal points of their instructional planning. Second, this finding has implications for graduate programs in instructional leadership as they prepare leaders for schools. These programs should equip instructional leaders with the knowledge and skills to develop strategies toward developing the ability of their faculty to include facilitating student learning as one of the important components of their instructional planning. Third, this finding has implications for undergraduate teacher education programs as they prepare novice teachers for the teaching profession. These novice teachers should be made aware of the importance of including facilitating student learning as one of their primary emphases for instructional planning.

The long-range goal of the research is to use knowledge about instructional planning and decision making to identify important determinants of instructional planning processes and content in secondary schools. Such knowledge would be useful to instructional leaders in evaluating instruction in their schools and in evaluating recent proposals to improve instruction in secondary schools.

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Appendix A

Table 1

Varimax Rotated Factor Matrix Showing Factor Loadings, Eigenvalues, and Variance for the Factors that Influence the Instructional Planning Decisions of Secondary School Teachers

Factor Loadings						
Variables	I	II	III	IV	V	VI
Q1	0.09	0.00	0.11	0.06	0.13	*.72
Q2	0.35	0.02	*.47	0.01	-.15	-.28
Q3	*.78	0.05	0.10	0.14	0.18	-.14
Q4	*.85	0.07	0.08	0.07	0.10	-.01
Q5	0.34	0.00	*.44	0.16	0.30	0.03
Q6	0.00	*.62	0.36	-.00	0.26	0.07
Q7	0.33	0.04	*.58	0.22	-.28	0.15
Q8	0.06	0.22	*.60	0.10	-.26	0.22
Q9	0.11	*.78	-.03	0.14	-.19	0.00
Q10	0.26	0.05	0.21	*.72	-.13	0.13
Q11	0.24	*.60	-.01	0.30	0.05	-.03
Q12	-.07	*.47	-.00	-.14	0.48	-.03
Q13	0.02	0.09	*.67	-.06	0.20	-.16
Q14	-.00	*.58	0.27	0.00	0.29	0.12
Q15	*.69	0.12	0.15	0.14	-.12	0.36
Q16	*.68	0.23	0.09	0.14	-.15	0.39
Q17	0.08	*.81	-.01	-.00	0.09	-.01
Q18	-.00	-.02	*.68	0.21	-.02	0.24
Q19	0.07	0.34	0.11	0.51	*.32	0.13
Q20	0.16	0.19	-.10	0.24	*.59	0.22
Q21	0.34	0.00	*.47	0.37	0.19	0.25
Q22	0.07	0.04	0.08	*.85	0.07	-.04
Eigenvalues	5.55	2.55	1.67	1.35	1.08	0.97
Proportion of Variance	0.25	0.11	0.07	0.06	0.04	0.04
Cumulative Proportion of Variance	0.25	0.36	0.44	0.50	0.55	0.60

Significant loadings are in bold

* Loadings selected for the corresponding Factor

Table 2**Analysis of Variance for Null Hypothesis 1: Years of Teaching Experience on Factors I through VI**

Factor I					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	3.74	1.87	0.20	0.82
Within	265	2512.35	9.48		
Total	267	2516.10			

Factor II					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	118.76	59.38	6.56	.0017*
Within	269	2435.92	9.05		
Total	271	2554.69			

Factor III					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	20.86	10.43	0.45	0.63
Within	239	5524.16	23.11		
Total	241	5545.02			

Factor IV					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	2.66	1.33	0.45	0.63
Within	267	786.82	2.94		
Total	269	789.48			

Factor V					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	4.14	2.07	0.79	0.45
Within	264	692.16	2.62		
Total	266	696.31			

Factor VI					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	2	0.30	0.15	0.13	0.87
Within	267	309.41	1.15		
Total	269	309.71			

*p < .05

Table 3

Tukey's Studentized Range (HSD) Test for Differences Between Means for Null Hypothesis 1: Years of Teaching Experience on Factor II

Differences Between Means

Factor II			
Years of Teaching Experience	Group 3	Group 2	Group 1
Group 3 (11 or more years)	--	.09	-1.55*
Group 2 (4 - 10.9 years)		--	-1.64*
Group 1 (fewer than 4 years)			--

* $p < .05$

Table 4**Analysis of Variance for Null Hypothesis 2: Hours of Graduate Credit on Factors I through VI**

Factor I					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	53.37	17.79	1.91	0.12
Within	264	2462.72	9.32		
Total	267	2516.10			

Factor II					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	30.18	10.06	1.07	0.36
Within	268	2524.50	9.41		
Total	271	2554.69			

Factor III					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	129.41	43.14	1.90	0.13
Within	238	5415.61	22.75		
Total	241	5545.02			

Factor IV					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	6.61	2.20	0.75	0.52
Within	266	782.87	2.94		
Total	269	789.48			

Factor V					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	3.35	1.08	0.41	0.74
Within	263	693.06	2.63		
Total	266	696.31			

Factor VI					
Source	df	Sum of Squares	Mean Square	F Value	Pr > F
Between	3	3.06	1.02	0.89	0.44
Within	266	306.65	1.15		
Total	269	309.71			

Table 5**T Test for Null Hypothesis 3: Gender on Factors I through VI**

Factor I						
Gender	N	Mean	SD	t value	df	Pr > T
Male	102	8.50	2.86	1.48	259	0.1392
Female	159	7.93	3.20			
Factor II						
Gender	N	Mean	SD	t value	df	Pr > T
Male	105	11.42	3.42	3.58	182	0.0004*
Female	160	10.01	2.62			
Factor III						
Gender	N	Mean	SD	t value	df	Pr > T
Male	97	20.48	5.03	1.01	235	0.3094
Female	140	19.83	4.66			
Factor IV						
Gender	N	Mean	SD	t value	df	Pr > T
Male	105	5.38	1.57	-0.63	261	0.5244
Female	158	5.51	1.80			
Factor V						
Gender	N	Mean	SD	t value	df	Pr > T
Male	104	2.79	1.06	-0.80	261	0.4241
Female	159	2.90	1.06			
Factor VI						
Gender	N	Mean	SD	t value	df	Pr > T
Male	104	4.31	1.60	-0.60	258	0.5427
Female	156	4.44	1.62			

*p < .05

Table 6T Test for Null Hypothesis 4: Ethnicity on Factors I through VI

Factor I						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	231	8.25	3.10	1.30	262	0.1939
African American	33	7.51	2.86			
Factor II						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	234	10.72	2.94	2.04	265	0.0419*
African American	33	9.57	3.50			
Factor III						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	207	20.53	4.66	3.46	237	0.0006*
African American	32	17.43	4.93			
Factor IV						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	233	5.61	1.72	3.61	263	0.0004*
African American	32	4.46	1.36			
Factor V						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	234	2.92	1.02	2.93	264	0.0036*
African American	32	2.34	1.20			
Factor VI						
Ethnicity	N	Mean	SD	t value	df	Pr > T
White	232	4.46	1.61	1.93	260	0.0541
African American	30	3.86	1.54			

*p < .05

Appendix B

TEACHER PLANNING QUESTIONNAIRE

How often are your instructional planning decisions influenced by the following factors? Please circle one of the following categories for your response:

1 very often	2 often	3 sometimes	4 rarely	5 never
-----------------	------------	----------------	-------------	------------

By what you learned in:

- | | | | | | |
|------------------------------------|---|---|---|---|---|
| 1. undergraduate teacher education | 1 | 2 | 3 | 4 | 5 |
| 2. inservice training | 1 | 2 | 3 | 4 | 5 |

By your desire to:

- | | | | | | |
|---|---|---|---|---|---|
| 3. meet district objectives | 1 | 2 | 3 | 4 | 5 |
| 4. fulfill district curriculum guide requirements | 1 | 2 | 3 | 4 | 5 |
| 5. satisfy parental expectations | 1 | 2 | 3 | 4 | 5 |
| 6. maintain student attention | 1 | 2 | 3 | 4 | 5 |
| 7. meet your department chair's requirements | 1 | 2 | 3 | 4 | 5 |
| 8. incorporate suggestions from other teachers | 1 | 2 | 3 | 4 | 5 |
| 9. achieve the lesson goals | 1 | 2 | 3 | 4 | 5 |
| 10. follow the teacher's manuals | 1 | 2 | 3 | 4 | 5 |
| 11. have students perform well on unit tests | 1 | 2 | 3 | 4 | 5 |
| 12. plan according to your personal beliefs about instruction | 1 | 2 | 3 | 4 | 5 |
| 13. implement what you learned in professional journals | 1 | 2 | 3 | 4 | 5 |
| 14. maintain an orderly transition between activities | 1 | 2 | 3 | 4 | 5 |
| 15. fulfill state curriculum guides | 1 | 2 | 3 | 4 | 5 |

16. fulfill state competencies	1	2	3	4	5
17. facilitate student learning	1	2	3	4	5
18. satisfy team teaching requirements	1	2	3	4	5
19. avoid interruptions during class	1	2	3	4	5
20. do what your previous teaching experience indicated	1	2	3	4	5
21. satisfy your principal's requirements	1	2	3	4	5
22. follow the textbook	1	2	3	4	5

Background Information

How many **credits** have you earned beyond an undergraduate degree? ____

Your years of **teaching experience** ____

Gender: (Please check one)

Male ____ Female ____

Ethnicity: (Please check one)

Caucasian ____

African American ____

Other (please specify) _____

Return to: **Daniel Egeler**
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 Tuscaloosa, AL 35486-0563

TECHNOLOGY PLANNING: THINKING STRATEGICALLY FOR PLANNING

Kathleen C. Westbrook

Within the early part of this century rapid expansion and growth of urban centers placed incredible stress on the programs and infrastructure of public education (Callahan, 1962). Planning was the process by which management could more efficiently and effectively utilize resources, both fiscal and human, at their disposal. In that period so strongly identified with Frederic Taylor, Henry Fayol, and others, public school managers drew heavily from the principles of scientific management and efficiency to produce plans which detailed their escalating levels of fiscal and physical need.

In the last decade, the need for detailed and well-formulated plans for educational programs, fiscal resources, and infrastructure has, once again, emerged as a preeminent activity. This is due primarily to the serious decline in available resources, a public demand for increasing levels of accountability from all levels of government, and a reluctance to fund higher taxation requests. These changes, especially those related to the shift from an industrial to a "paperless" economy and technological systems, have confronted educational planners with resource issues heretofore unknown. These issues revolve around:

- (1) Re-training an aging teaching cadre on the importance and use of information-age technology;
- (2) Integrating technology knowledge into the teaching-learning act; and
- (3) Garnering sufficient levels of new, or reallocated resources to purchase, install, and maintain technology systems which are not outmoded before being purchased, delivered, or operational.

This brings us to the difference between what in K-12 educational settings is viewed as the "long range" planning process versus "strategic" planning.

Long-Range Planning

Traditionally long-range planning encompassed the identification of goals and objectives to be achieved within a stated period of time. In education, this looked approximately 10 years into the future. First, the organization defined, clarified, and wrote a statement of purpose or "mission." Next, goal statements were prepared which allowed the organization to see the relationship between the mission and the educational program. Yearly objectives were determined to show how progression toward achievement of the goal statements would be realized, and finally a timeline was constructed with goals and objectives to be completed during a given fiscal period, usually one year, of the plan. At the end of the timeline an assessment of effectiveness would provide data for analysis and construction of the next plan. Plans were viewed as discrete entities with little integration or relationship to the complexity of activities taking place. For example, a single plan might be prepared focusing on the educational needs of the schooling population and separate plans prepared for fiscal resources, or infrastructure needs. It was assumed by stakeholders that such plans were integrated by the central administration and took into consideration demographics, community culture, diversity, and changing

pedagogical trends, as well as resource demands and availability. Stakeholders also (rightly or wrongly) assumed there was a sense of unity and process at work to carry a schooling system forward-i.e., a “synergistic roadmap” into the future. Unfortunately, we have grown to see that much that occurs in organizations is situational and idiosyncratic (Naisbitt & Aburdene, 1985; Peters & Austin, 1985). Decisions are based on the foreseeable future and often solely on extinguishing today’s fires rather than on measured success. The plight of public education may also be attributable to the unparalleled prosperity of the post-WWII era. “Baby Boomers” significantly stress the capacity of existing systems. Their increasing numbers precipitated a level of unparalleled expansion in the numbers of both American education’s classrooms and teachers. Fortunately, it occurred in concert with a parallel “boom” in the U.S. and world economies. The U.S. was unequalled in world production, use, and export of goods; growth in Gross National Product and per capita income; as well as extension of educational opportunity to mass populations. America was not only the cultural melting pot, but also the educational marketbasket for the world. The last decade, however, has seen a radical shift in this picture--the economy of 1992 slowed to almost a standstill. Since 1983, when the first major report on the status of the educational systems was issued (National Commission, 1983 April), numerous reports¹ have documented declines in achievement as well as a declining quality in American education.

Long-range planning is given less emphasis in times of boom as the emphasis shifts to solving the crisis-of-the-moment--whether that crisis is unhoused students or teacher shortages. However, as the boom subsides and new groups enter the mainstream, the need for a renewed emphasis on planning begins to emerge. Simultaneously, the competitive advantage enjoyed by the American economy has eroded. The Europeans, especially the Germans, as well as the Japanese, studied Americans and began to not only challenge the monopoly of American growth, but to develop strategies and methods for surpassing it. The most noticeable trends were first seen in manufactured goods, followed by substantial gains in educational achievement eventually surpassing American students, and finally taking the inventions of American minds and developing smaller, more efficient, and less expensive models to sell in the world marketplace. The most notable of these is the miniaturization of the microprocessor chip, making possible the development, production, and mass marketing of technology and technology-related products, and precipitating a virtual global revolution from industrial to “high tech.”

Strategic Planning

The singular component which sets strategic planning apart from long-range planning is the inclusion of environmental scanning. Like long-range planning, strategic plans begin with a statement of mission or purpose, develop goals and discrete objectives for the achievement of progress, and contain feedback loops for the assessment of effectiveness. But the term “strategic” comes from including a rather unassuming element dedicated to identifying changes in the environment surrounding the organization. It is this barometer for shift sensing inside the organizational envelope which necessitates readjustments in the plan and provides strategic planning its effectiveness. Such shifts may include major population upward/downward trends, rapid changes in the socioeconomic composition of communities, ethnic or racial migrations, or similar features which impact the mission, goals, and objectives developed by the schooling system. Such shifts precede major priority and policy conflicts between the community and teachers, the community and school administration, or between the school administration, teachers, and their elected boards of education. Such policy and priority shifts often result in more rapid turnovers of administrative personnel (Lutz & Iannacone, 1978; Iannacone & Lutz, 1970), a decline in teacher morale (Grant, 1988), or a sense in the community that the school district is just not effectively doing its job (Rossman, Corbett, & Firestone, 1988).

In addition to this external environment, the process of environmental scanning requires the organization to also look into itself, that is, to scan internally and identify those elements of the organization which act as enablers or roadblocks to more effective, efficient, and functionally creative organizations. It asks the organization to identify ways of knowing for overcoming the roadblocks and facilitating and enabling individuals within the organization with a renewed sense of synergy (Peters, 1987). Ellison and Smith (1985) have characterized these periods as identified by sluggish economies, global competition, and sociopolitical pressures and challenges as periods necessitating critical engagements with strategic planning and scanning. This forces organizations (and they refer specifically to educational organizations) to focus on their interaction with the environment. What educational administrator would not like to know which pedagogical trends will be in place 10 years from now, or which programs of the federal government will no longer exist, or which mandates will disappear or become required? Foresight is not solely a domain of the business elite, the intellectually curious, or the terminally educated. It is the reasoned investigation of the external and internal constraints and opportunities surrounding any organization which wishes to remain viable and to thrive.

Bryson (1988) identified a number of key factors necessary when thinking about the scanning process including:

- (1) Selecting issues and trend “categories.” He suggests political, economic, social, and technological;
- (2) Identifying appropriate “scanning” sources (professional journals, key informants, newsletters, etc.);
- (3) Understanding the cycles that issues in the external environment take: (i.e., How often does this issue come around?; How long does it usually stay within the “window of interest” by policymakers? Can your organization react rapidly to take advantage of the next “window?”);
- (4) Asking effective questions to ensure effective external scanning: (i.e., Is this a new issue or trend? Were you surprised where it came from (source)? Does it fly in the face of the current “conventional wisdom” ? Can you determine if there are patterns/trends?).

More recently, Handy and Herman (1992) discussed scanning external environments but placed only minor emphasis upon internal scanning needs. As Bryson (1988) states:

Most organizations . . . have volumes of information on their inputs . . . They tend to have a less clear idea of their present strategy, either overall or by function. And typically they can say little, if anything, about outputs, let alone the effects those outputs have on clients, customers, or payers . . . (p.55) Stakeholders will judge the worth of an organization according to how well it does against the criteria the stakeholders--not necessarily the organization--wish to use. If the organization cannot *demonstrate its effectiveness against the stakeholders' criteria*, then regardless of any inherent worth of the organization, stakeholders are likely to withdraw their support. (p.55) [emphasis added]

Technology Trends and School Settings

Since *A Nation at Risk* (NCEE, 1983 April) was released, the call for the reform, revitalization, and restructuring of American education has seen a steady stream of studies and reports. One of the more recent is the *America 2000* (1991) proposal put forth by President Bush and Education Secretary Lamar Alexander and endorsed by the U.S. Governor's Association. It called for upgraded skills, integration, and serious application of technology and technological skills within K-12 educational settings. This "global village" will not encompass merely those few who are specialists in the technology areas, but rather will integrate technology totally into all phases of the work, home, and leisure-time stream. Today, cellular communication has advanced so we can now receive work-related phone calls on the golf course or at a barbecue; the miniaturization of the microcomputer chip and printed circuits has made possible microcomputers that fit inside our briefcases and some even small enough to fit into the palms of our hands; fiber optic networks and digital transmission are changing the speeds and the amount of data we move between sites not only in the research and academic communities, but in our homes as well. Today it is just as probable to use a computer and modem in the home as it is in the office. Microcomputer software now makes it possible to conduct cash flow analysis, prepare and transmit state and federal tax returns, conduct large scale statistical analysis, author papers and novels, create fashions and design buildings--all in the comfort of our homes-- and then transmit the results to remote sites via home-based modems. In 1970, these operations filled an 8' x 10' room, and required a degree in computer science to use. There is no doubt that the information and technology age has arrived, invaded, and set up camp.

Reports related to K-12 education have called for and included technological reform --but have K-12 educators and administrators responded? Has there been a parallel response by the higher education community who train and educate teachers and school administrators? The answer is yes . . . and no. In a recent article, John Clement, director of EDUCOM's K-12 Networking Project (Clement, 1992 July/August) reported on the preliminary results of a study of 775 individuals at domestic EDUCOM member institutions, as well as other colleges and universities. The study was designed to:

. . . better understand the range and scope of collaborative networking activities between colleges and universities and schools . . . with support from the National Science Foundation, we have been conducting a survey of postsecondary institutions to document these activities. (p.44)

While this preliminary analysis only reflects 150 responses, some important facts were reported. For instance, the most extensive level of technology involvement is visible in statewide networking linkages. Projects such as Texas' TENET (The Texas Education Network), TRIE (Technology Resources in Education) in California, PEN (Public Education Network) in Virginia, EIES (Electronic Information Exchange System) at New Jersey's Institute of Technology, NODAK housed at North Dakota State University, and others attached to regional colleges and universities around the country provide K-12 systems with access to a larger telecommunications system by linking these networks. The two services most frequently cited were dial-in access to campus library systems and pass-through services to both BITNET and INTERNET network systems. These linkages allow K-12 teachers, students, and administrators access to library searches, free software, and electronic communications with other researchers, teachers, and resources worldwide. As an example, I recently received an "open" message through a BITNET user's group for individuals interested in the use of Information Technology in Higher Education. This open message was sent by a class of 11th and 12th grade computer science students in Virginia who were learning how to use their school's Local Area Network to dial-in to the PEN (Virginia Public Education Network) as a gateway to the BITNET/INTERNET

system. They were interested in communicating with another class. Their request was forwarded to a class of K-12 doctoral students in School Administration who were learning to use a university computer as part of a research class. It seemed a "natural marriage" . . . both were at the same level when the subject was teleconferencing and network sharing. So it gave them both a reason to use the system--and experience what teleconferencing and network sharing really means. Yet these two groups are examples of both how far we've come and yet need to go in K-12 educational technology. Here is a group of high school students already more familiar with the possibilities of a telecommunications network than those who are responsible for the planning and management of those systems.

There is no question that the resource support base for K-12 education in this country is the largest it has ever been, but it is also a fact that this resource base is shrinking. Shrinking not in real dollar growth, but in dispersion. The fact is that while real dollar growth and spending in K-12 education has risen dramatically in the past 20 years, the base of programs on which it spends has outstripped its ability to keep pace. The effect, then, is that programs which are "mandated" by federal or state statute are funded, while those which are necessary, but not mandated, are treated as "add-ons" or "frills."

Such has been the fate of technology growth in K-12 settings. In addition, there has been little reward for K-12 administrators or teachers to acquire these skills, since the number of computers (mainframe, mini, or micro) available in K-12 settings outside of administrative or ancillary applications has severely limited its integration (not just the "add on") of this media as a useful educational teaching-learning tool. It is not treated as a vehicle to enhance library research or to reinforce math, science, or technical concepts with exercises and opportunities to "re-play" experiments. Nor is it a vehicle for experimenting with line, form, color, or tone in music and art--rather it has become the "end result" of computer literacy or the jump directly to programming skills. Most individuals working in the 21st century will need little to nothing in the way of programming skills, but they will need to be able to use and integrate the computer into their daily activities. This, K-12 education in this country (except in isolated situations) has yet to fully grasp. In addition, today's higher education teaching faculties themselves are unskilled in the integration or application of computers and technology. Again, Clement (1992, July/August) reports that the most common responses received on constraints by higher education include no initiative taken by teacher education faculty or that K-12 educators have not asked for technology and networking relationships. Almost one-third of the preliminary responses (44/150) reported that higher education institutions were neither working on telecommunication-related activities with schools, nor were planning to do so because they had no networking on their own campuses! Strategic plans in higher education, as Handy (1992) reported, often do not internally scan department and faculty "stakeholder" agendas so that institutional plans can be amended to include such new and emerging agendas and capital priorities. Technology must be a part of the strategic planning process, for it impacts on decisions for staff and professional development, fiscal priorities for program and capital acquisitions, and on the supporting services to manage and maintain it.

A Revised Strategic Planning Model

What are the reasons for "tinkering" with the existing model for strategic planning? One is the serious decline in resources available at all levels of educational organizations. More specifically the decline in real dollars is accompanied by escalating levels of stakeholder perception and reticence to "spend more and get less" for the educational dollar. Add to this a considerably broader mission and service clientele for both K-12 and higher education today, also add the reality of the technology revolution, and you have a scenario which requires an

updated model for planning, programming, and evaluative purposes. Herman (1992) discussed several factors which lessened an organization's ability to successfully implement strategic planning. These included a desire for the "quick fix," lack of support from the CEO, lack of governing board sanction, non-inclusion of stakeholders, and reluctance to allocate sufficient human, fiscal, or material resources to the process. He also pointed out the exclusion of data uncovered by the external scanning process, or its lack of incorporation due to insufficient scanning, as another potential factor contributing to failure.

...* Some planners forget to conduct activities which identify trends to be dealt with during the development of the organization's strategic plan.

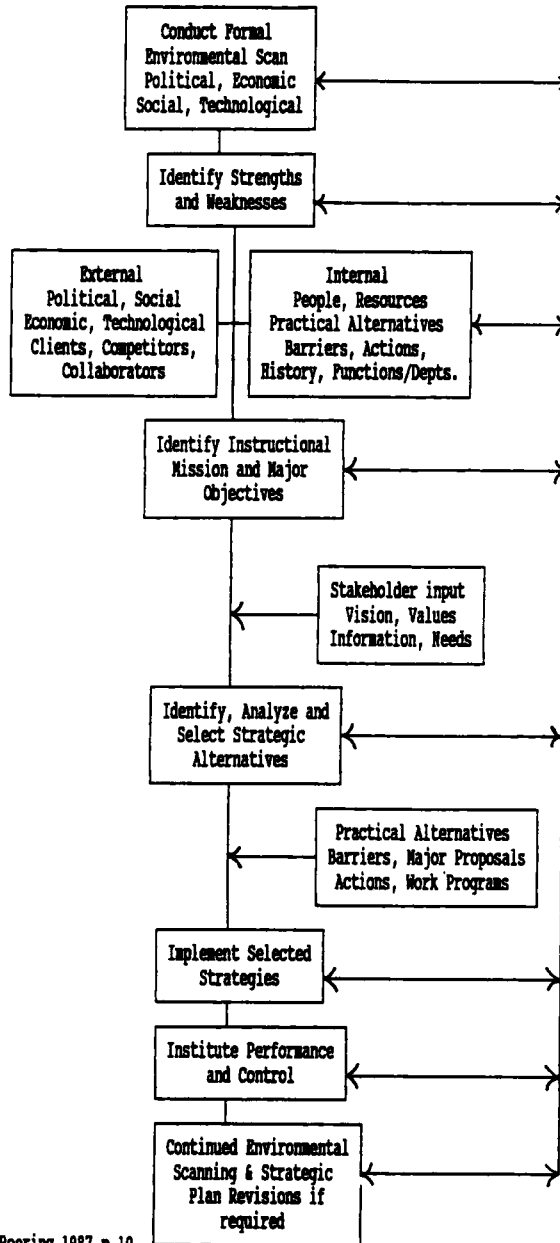
...* Some organizations do not conduct a needs analysis which identifies the gap between "what should be" and "what is."

...* Most importantly, those involved in strategic planning and operational activities are not clear-cut, identifiable results oriented nor are they strategic thinkers. (Herman, 1992, p.40)

The lack of incorporation of technological implications as a strategic factor assumes its influence is peripheral to central decision making and effective operations. Rather, the techno-explosion² will far outstrip organizational capacities if looked upon as spurious to an educational organization's mission.

What then does a revised model for planning look like? Handy (1992) and Bryson and Roering (1987) have both developed flow charts on the strategic planning process. Figure 1 (located on page 44) modifies these two models and highlights the locations of technological scanning as well as stakeholder input on mission, vision, and objective formulation, and the consideration of practical alternatives, barriers, and proposals for alternatives. While this modified model is not revolutionary, it is specifically designed to identify the appropriate location in the process where components both internal to the organization or external to it are necessary to "... improve on the rawest forms of political decision making . . . by assuring that issues are raised and resolved in ways that benefit the organization and its key stakeholders" (Bryson, 1988, p.70).

Figure One



Adapted from: Handy, 1992, p.25; Bryson & Roering, 1987, p.10

The Future

What trends, then, does scanning the technological horizon provide for educational strategic planning? First, the nature of academic computing regardless of level has changed. Centralized computer centers whose sole job was to provide internal administrative or research support no longer operate in this way. Decentralized services linking the proliferation of PC-based work stations have shifted the emphasis away from a need for narrowly focused service centers to individual applications. This decentralization requires inclusion of these new end-users as stakeholders in the strategic planning process. Their visions for programs and curricula need to be sought out and incorporated into organizational plans as well as in the resulting allocation of fiscal and personnel resources.

Second, the changing face of the information generation requires technological capabilities for direct and immediate access. By the year 2001, our present generation of new data will radically alter the face of library use and information dissemination in all educational settings. The advent of local, statewide, and international networks (such as BITNET/INTERNET) will continue to move our knowledge base away from a historic reliance on "hard copy" and toward more "electronic" storage, retrieval, and delivery systems. New additions and their diffusion will be almost instantaneous around the globe and available in real-time 24 hours per day. Reading, research, and discussions will no longer be restricted by geographic location, time zones, or travel. These resources will be as necessary for pre-school and high school students as for Ph.D. researchers and administrators.

While the cost efficiencies afforded by centralized systems may be eroded by such decentralized systems and require greater investments of fiscal and personnel resources, they will be balanced by some distinct advantages. These include computing as an integral tool to the teaching-learning and staff development processes. Applications such as simulations and computer modeling are already taking hold in postsecondary education and will rapidly replace many hands-on activities in K-12 sectors as well. This usage will provide greater responsiveness to institutional/organizational missions, and the combination of local systems and central computers as "gateways" to the larger world of telecommunications will allow individuals to decide when and how best to use diverse resources for learning and individual productivity enhancement.

Following increases in productivity, such diffusion and access will also foster an increased knowledge about one's own discipline as well as closely related ones, while encouraging unique, creative, and innovative approaches to the instructional, evaluational, and accountability processes.

Finally, as Kettinger (1990, Fall) states, ". . . technology is now powerful and widespread enough to allow individual [sic] conduct [of] research and offer instruction that was not previously feasible" (p. 20). It is clear that such systems of diffusion will require greater policy level involvement by user groups. These users, who formerly were not a part of the discussion-decision loop, will be the primary recipients of policies developed by organizations who serve as stakeholders, and who will increasingly need and demand inclusion in both the internal scanning activities and the mission and vision development components of strategic plans. If they are not included, the process of strategic planning will fail to provide the means to effective policy planning and improvement of practice. Technology is changing the face of "what is" and it must be included in the strategic process in order for educational organizations to effectively plan and operate in the "what ought to be."

ENDNOTES

1. See also the following reports: *American association of colleges for teacher education* (1988). *School leadership: A preface for action*. Washington, D.C.: Author; Association for Supervision and Curriculum Development. (1986, September). *School reform policy: A call for reason*. Alexandria, VA: Author.; Carnegie Forum on Education and the Economy. (1986, May). *A nation prepared: Teachers for the 21st century*. Princeton, NJ: Author.; Education Commission of the States. (1983). *Action for excellence*. Denver, CO: Author.; Holmes Group. (1986, April). *Tomorrow's Teachers*. East Lansing, MI: Author.; Institute for Educational Leadership. (1986). *School boards: Strengthening grass roots leadership*. Washington, D.C.: U.S. Government Printing Office.; National Governor's Association. (1987). *The governors' 1991 report on education - time for results 1987*. Washington, D.C. Author.; National Science Board. (1983). *Educating Americans for the 21st century*. Washington, D.C.: Author.; Twentieth Century Fund. (1983). *Making the grade*. New York, NY: Author.

2. For example the GUTENBERG Project has as "a goal of producing one trillion electronic texts by December 31, 2001." In their newsletter they state, "We should be at about 2.4 billion with release of the following not counting pre-1991 releases: which are still in the process of being dug out of our archives, new headers attached, and new placement in new directories on our fileserver." This project is for the creation and distribution of English language electronic texts and each added piece is thoroughly checked to ensure it is legally redistributable via electronic media. It is housed at Illinois Benedictine College, Lisle, Illinois.

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A PLANNING PARADOX: ONE SCHOOL'S EFFORT TO RESTRUCTURE TO MEET THE NEEDS OF A NATIVE AMERICAN STUDENT BODY

Carolyn M. Shields

"Across the United States today, states and school districts are adopting various models of restructuring as a strategy to qualitatively improve the viability and competence of educational systems and schools as organizations" (Dreyfuss, Cistone & Divita, 1992, p.77). The concept of restructuring is nebulous, and the impetus is both complex and challenging. On the one hand, new approaches to education are prompted by emerging theoretical approaches: a constructivist perspective of knowledge (Marshall, 1992), an empowerment perspective focusing on the notion of human agency (Giroux, 1992; Freire, 1985); and a renewed focus on plurality and multiethnicity. On the other hand, restructuring is prompted by practical considerations; education as it has traditionally been understood and practiced is not achieving the goal of enhancing the educational experiences and life chances of all students. Students from minority groups still seem to be particularly at risk.

The challenges facing those engaged in educational planning in this age of complexity and uncertainty are enormous. As Greene (1993) suggests, even "those present on a common ground have different locations on that ground; and each one 'sees or hears from a different position'" (p.13). Further, the history of educational planning and research in general supports the contention that, to date, some of these positions have been better represented than have others. This paper will describe the efforts of a small K-6 staff "in a different position" to plan its approach to restructuring for its predominantly native student body. In particular, the efforts of this school became focused around one aspect of its strategic plan: a change toward a nongraded curriculum delivery model. The context is specific: the student body is more than 95% Navajo; the principal and 70% of his staff are "Anglo." Furthermore, the case is paradoxical: some would say it represents a lesson in how not to plan; yet, positive changes have occurred in Red Cliff School, and much may be learned from its struggles. Thus, the purpose of this paper is to describe the planning efforts of one small Navajo school within a district restructuring effort.

Carter states (1993), that "stories are "constructions" that give a meaning to events and convey a particular sense of experience" (p.8). In telling this story, the author hopes to imbue it with meaning such that the reader may recognize and learn from areas of commonality and reflect upon the extent to which the planning issues raised by the specific context of Red Cliff School are also relevant for different educational contexts. The case raises questions concerning the appropriateness of traditional approaches to planning for change and also begins to address the difficult planning tensions which occur when a district's goals are to be attained through an autonomous site-based approach to change.

In the next section, the theoretical perspectives and methods for the study will be identified. Both the district context within which the planning for restructuring occurred, and the school planning process itself will be described. Finally, the data will be analyzed and some issues raised for consideration and discussion.

Theoretical Perspectives

The description and analysis of the case itself are informed by concepts from three theoretical perspectives: literature dealing with educational planning, with nongraded schools, and the concept of a learning organization as it relates to planning for the implementation of educational change.

Educational Planning

English (1992) reminds us that “planning is essentially, and most important, a “conceptual” business as opposed to an “activity” (p.ix). Kaufman elaborates this concept by affirming that:

“Simply changing the labels for what we do (restructuring, back to basics, local control, competency-based education) and the like will not work. We must change the way we think about education . . .” (p.3).

This change in thinking is also supported by Bailey (1992) who says that “restructuring requires rethinking. Restructuring requires a shift in paradigms. Restructuring is not keeping the old order in place and reshuffling some activities; neither is it about a new public relations campaign that only touches the surface” (p.16). Thus, it becomes apparent that before a school or school district embarks on a program of fundamental reform or restructuring, considerable attention must be paid to changing present patterns of thinking about education and educational services. In other words, educational change which begins with activity--changing or tinkering with organizational arrangements, structures, programs, or curriculum--is unlikely to result in meaningful changes for students. Rather, recent approaches to educational planning appeal for a different focus: “determining where we are going, and why we want to get there, and obtaining a shared commitment for both the journey and the destination” (Kaufman, pp.3-4).

The challenge for educational planners in this decade and beyond is how to plan for complexity and ambiguity and yet provide guidelines which will be useful for educators. The Schwartz and Ogilvy (1979) “new world view” assists planners in the conceptualization of this task. An awareness, for example, of the morphogenic nature of educational organizations requires plans that are strategic without being prescriptive. An acceptance of a multiplicity of valid yet different perspectives requires planning with rather than for client or stakeholder groups. Changing views on leadership requires an emphasis on participation, collaboration, and heterarchy rather than a hierarchical approach to planning. Patterson, Purkey, and Parker (1986) have identified some key differences between what they call strategic planning and more traditional approaches to planning. Their emphasis, among other things, on an integrated system perspective rather than a segmented approach, and on masterful planning rather than the master plan, constitutes a progressive approach to educational planning. Another positive change reflected in the planning literature is the focus on outcomes (results) rather than on the prescription of process and means. Bliss, Firestone, and Richards’ (1991) distinction between a strategic (or technical) emphasis and a holistic one may prove important in an identification of desirable outcomes. Further, when outcomes are chosen and specified as desirable, questions such as those posed by Apple (1982) or Giroux (1988) concerning the ethics of choice may also need to be incorporated into the lexicon of all educational planners.

Nongraded Schools as a Response to Restructuring

In addition to the widespread concern that schools are not working for our “at-risk” children who are becoming an increasingly large part of the school population, more knowledge about grouping and teaching strategies, the restructuring movement which advocates teacher and student teaming, and the addition of thinking skills in the curriculum, school boards have become aware of the research on retention and concerned over the numbers of children being retained or placed in transition classes. (Pavan, 1992, p.8)

One solution to the problem identified by Pavan, and one of the changes proposed by Red Cliff School, is a nongraded approach to schooling. In both 1970 and 1987, using a Delphi approach to information collecting, Pavan set out to investigate the assumptions underlying nongradedness. She found that the principles associated with nongraded schools focus on the

classroom itself and the educational experience offered to students. Such goals as attending to individual differences; enhancing student autonomy; helping students to achieve their maximum potential; flexibility and variety in grouping for instruction, as well as in curriculum and teaching strategies; and changes in assessment practices (1992, p.9) constitute major changes in the ways in which schools address the needs of their students. A number of these elements which were central to the planning efforts of both the school district and Red Cliff School will be examined in this paper.

Planning as a Function of a Learning Organization

The emphasis on conceptualization as the first step in an educational planning process identified above is also consistent with Senge's (1990) understanding of a learning organization. Senge advocates what he calls *metanoia*, a Greek word which means "a shift of mind" (p.13). According to Senge, "to grasp the meaning of 'metanoia' is to grasp the deeper meaning of 'learning,' for learning also involves a fundamental shift or movement of mind" (p.13). The concept of organizational learning is not new, but seems to have been extended and popularized by the wide appeal of Senge's book. Further, the five disciplines which he identifies as necessary to a learning organization seem to provide a useful framework for this study of planning for significant educational change. Indeed, as we examine the case of Red Cliff School, it will be useful to question the extent to which either a more traditional action-oriented approach or a newer conceptual approach to planning consistent with the learning organization appears dominant.

Senge (1990) identifies five disciplines which he believes are essential: systems thinking, personal mastery, mental models, shared vision, and team learning. Systems thinking involves examining the big picture with its complexity of interactions and interdependencies. Personal mastery requires a commitment on the part of all participants to lifelong growth and learning. The development of appropriate mental models results from an in-depth examination of our assumptions, values, and beliefs. Vision must emerge from an organization rather than be imposed upon it, in order for a shared focus to guide the organizational planning. Finally, team learning results from dialogue and a recognition of the synergy of members working together. These concepts related to nongraded schools, to the implementation of change, and to the planning process itself provide the anchors for the presentation and analysis of the planning efforts of Red Cliff School.

Methods

The data for the paper come from multiple sources. Background material included an evaluation review of a district conflict and initiative from the 1970s (Ellison, 1977). Additional print sources included the current district plan (School . . . , 1991) and the school planning document. Unstructured interviews concerning the plan were conducted with the principal and eight of the nine teachers. The discussion will focus on issues related to the conceptual framework as well as those issues emerging from the interviews which will be presented by means of representative comments. A survey to identify teacher perceptions of the gaps between the existing school culture and their concept of a more desirable culture was administered. Finally, notes were taken by the writer, acting as participant observer, during four meetings at which she acted as facilitator as the staff worked towards building consensus and commitment to the plan itself.

Context

The school division is geographically large and somewhat isolated. It serves a population which is approximately 50% Anglo and 50% Hispanic and Native American. Generally, the two northern communities are Anglo, while the southern communities are predominantly Navajo. In 1959, despite the balanced district population, Navajo students comprised only about 6% of the school population. In 1974, a class action suit was brought against the school district by the Navajo students and parents alleging unequal educational opportunities for Native students, and failure to appropriate funds on an equal basis, and requesting that the district provide high schools and other facilities in predominantly Navajo areas, including bilingual and bicultural educational programs. As a result of an out-of-court settlement of this suit, new schools were built during the 1970s in the southern and eastern parts of the district. By 1974, the student population figure had increased to 47%, and by 1991, 51% of the students were either Navajo or Hispanic.

Red Cliff, a K-6 school, is situated geographically about mid-way in the district. Thus, its 128 students, about 95% of whom are Navajo, have a choice after completion of grade 6; some attend the predominantly Anglo middle school to the north, while others choose to attend the Navajo schools to the east. In either case, the drop-out rate of the school's graduates is similar to that of students throughout the district.

Student Drop-out Rates

In 1984, the drop-out rate across the state was reported to be 21.3% compared to a drop-out rate in the school district of 29.6% (identified by the 1980 census). However, according to one follow-up study begun with grade 7 students, for Navajo students the rate increases to a dramatic 51%. Another study indicated a rate of 59%. Even when the 15% of students who subsequently complete alternative adult programs leading to high school certification are included in the calculation, the drop-out rate of Native students in the district is 44% (double the district's average).

The District Planning Effort

In 1991, concerned about these statistics and the results of an earlier survey which focused on understanding the reasons for such statistics, the school district applied for and received a large grant designed to address the drop out problem.

The project as envisaged by district personnel recognized that in order for any lasting results to occur, a major restructuring of the school system had to take place. Briefly, the district grant would provide funds and resources to schools who would, in turn, develop plans to address three major areas of focus: the instructional process in terms of moving towards "teachers as facilitators", authentic assessment, and developing a caring school climate. The purpose was:

to create a learning environment which will reduce the unusually large percentage of youth who are at-risk of dropping out of school. . . . The entire District's educational programs will be restructured. . . . This will result in a system which will: (1) provide autonomy for principals and teachers to determine curriculum and instruction strategies; (2) provide curricula which is interesting and challenging . . . ; (3) create a school climate where students will feel important; (4) monitor attendance . . . ; (5) provide alternative retention practices; (6) coordinate services and activities for at-risk youth; (7) enhance communication among schools and facilitate transition from one level to the next; (8) promote parent and community involvement; and, (9) provide intensive staff training. (p.19)

Indeed, provision for staff training is extensive. Teachers of Red Cliff School are part of a cluster for whom 25 days (paid at overload) were provided during the summer of 1992; and for whom an additional 10 days of inservice will be provided during 1993 and 1994, with five more days in the summer of 1995. A half-time peer coach has also been allocated to the school for the 1992-93 school year. Funding has been made available to support the purchasing of a consultant's services and travel to attend inservice activities and conferences.

Thus, at the district level, considerable time, effort, and resources have been directed toward setting a stage for restructuring the district's schools to implement changes which will focus on teachers as facilitators and mentors, authentic assessment, and an educational climate in which everyone is considered important.

The School Planning Effort

Red Cliff School has nine teachers and a full-time principal. Three of the teachers are Native American; one of them moved to the area 25 years ago from the east. Two "Anglo" teachers have been in the school for more than five years. Other teachers seem to come and go on an annual basis; few live in the community. The principal, now in his fourth year as a principal of the Red Cliff School, lives in the Anglo community to the north. The school itself is a well-maintained, one-level brick building with a gym and a library. Posters and pictures decorate the doors and walls. The initial impression of a warm and comfortable environment is enhanced by open and friendly greetings from some of the younger students.

Consistent with the district's plan and intentions, each school was encouraged and expected to develop its own plans relevant to the three major initiatives undertaken by the district. The Red Cliff Elementary School Improvement Plan was developed primarily by an outside consultant in a four-day period in June 1991; it included seven headings:

1. Student Activities, Behaviors
2. Technology
3. Chapter 1
4. Special Education
5. Parent Involvement
6. Facilities
7. Methodology and Management

In 1992, a school organization flowchart and chart displaying the promotion process were appended to the plan.

A teacher recruited during June 1991 reported in the spring of 1992 that she had been shown the plan when hired and had become excited by it. Indeed, she had anticipated that the whole staff would share her enthusiasm and would spend the school year discussing the details and making further plans for the implementation of the school plan. However, she and other teachers agreed that such discussions had not taken place and, by March of 1992, staff were experiencing considerable frustrations and difficulties communicating among themselves.

Growing Concern

During a staff workshop designed as an opportunity to identify staff needs and to enhance communication, difficulties were expressed openly by several members. The staff were asked to identify, using a Nominal Group Technique, what they believed to be the strengths of the school; then to identify the weaknesses. The students themselves, a caring staff, and a good facility were identified among the positive features. However, similar items appeared on the lists

of negatives. Teachers recognized that “faculty complaining about other faculty” harmed morale and inhibited the possibility of implementing change. They perceived that between kindergarten and grade 6, children lost their enthusiasm and willingness to cooperate or learn. Student drop-out rates upon reaching school-leaving age were a concern. Uncertainty was expressed about how to implement a move to a nongraded school (e.g. what to do about phonics instruction; how to handle students who could read and students who were just learning their alphabet in the same class; how to teach mathematics). In addition, teachers stated that there had been no parental involvement in developing the school plan, and no needs assessment conducted prior to its development. Much frustration was expressed concerning their own sense of lack of ownership and discussion of the plan, lack of shared vision concerning its meaning or strategies for implementation, and about the internal staff conflicts.

At this meeting, the principal consented to circulate some information items to staff by memo and to permit discussion of the plan at subsequent regularly-scheduled staff meetings. Staff members agreed to participate in leadership functions, and some volunteered to rotate the position of chairperson of the staff meetings. The principal encouraged these members to take responsibility for developing the agenda for the meeting each was to chair. One person cautioned the principal that if there was to be a topic discussed such as “parental involvement,” then that was all the staff needed. They did not, she indicated, need a list of ideas or suggestions generated by him. Assent was immediately forthcoming. In addition, the staff decided that it would be useful to engage in a full day of planning and team building to attempt to address some of the issues they had raised. Prior to conducting the day-long workshop, the writer interviewed staff members in order to better understand the positions and issues which members might not have felt free to raise in the full group meeting.

Teacher Perspectives

Pauline, one of the Anglo teachers, sought out the author for a lengthy conversation prior to the full day’s planning workshop scheduled for late April. At that time, she reinforced the notion that teachers did not talk to one another very much; they certainly did not talk about the school plan. In fact, when she found they had never seen a copy of the district plan, she had procured one and circulated it among the staff members. In her opinion, there were major conflicts concerning the role Native culture should play in the school. She voiced the belief that they were trying to teach “in a vacuum.” She expressed concern that the one dominant expressed purpose for what they were doing at the elementary school was preparing the kids for the next school, rather than educating them. An additional difficulty which was expressed by this teacher concerned the effectiveness of the principal, who seemed more concerned with maintaining control than with providing support for teachers. However, the counterbalancing factor which she expressed several times was the nature of the students themselves. “They have a lot to teach . . . they are willing and motivated . . . hopeful, excited, like blossoms. They talk . . . they have lots to say.”

Although the interviews with the other teachers were initiated by this researcher and not by the teachers themselves, they generally corroborated Pauline’s comments and perceptions. They were unanimous in expressing their willingness to change: “It’s not that I don’t want to change”; “We need workshops . . . once we get on the road to change, maybe I can do this”; “I’m willing to try.” Yet, they were equally united in their confusion about what they were expected to do and how to go about it: “Something is needed”; “We tried this and it led to a state of confusion”; “We need more inservice . . . workshops to know exactly what we are doing and how to implement the program”; “I’m not sure what I am supposed to be doing.”

Teachers were open about the conflicts among them. There was a general perception that, despite her recognized expertise in a “whole language approach,” Pauline had caused difficulties and had heightened a “we/them” attitude among the staff. Others emphasized the need to approach the implementation of the plan in a united fashion: “We’ve got to come together as a whole”; “There hasn’t been much planning together”; “We were supposed to start teaming, but it broke down because of Pauline”; “She didn’t want to teach Math.” Again, teachers identified the students as being warm and open, the staff fraught by conflict and finger pointing, and the principal as “paralyzed in the staff meeting.” One teacher suggested that the plan was the result of somebody attempting to get money from somewhere and then trying to figure out what to do with it once it was received; she believed it would be appropriate to go back and start again. With this background information concerning the issues facing the staff, we began the anticipated day of planning together.

A Whole Day for Planning

Only two aspects of the day’s activities will be reported here: the results of a culture-gap survey and the discussion concerning the school plan.

A Culture Survey

Much can be learned about the climate within which planning for restructuring occurred by examining the school culture survey which was conducted as part of the day-long workshop. The Kilmann-Saxton Culture Gap Survey provides information concerning task support, task innovation, social relationships, and personal freedom. The developers of the survey suggest that a score of 3 is significant, while a score of 5 would represent a highly significant gap between the work group norms and the group beliefs. Negative scores apparently occur relatively infrequently, and thus need to be paid special attention. The composite staff profile is shown in Appendix A. Of the 10 people (9 teachers and principal) completing the survey, eight indicated problems in the area of task support with an overall measure of 3.9 which would indicate a considerable gap. In the area of task innovation, six indicated a problem, again with an overall score of 3.8. Social relationships overall fall within the acceptable range; however, there is obvious discrepancy with individuals scoring from 0 to 4 on the scale. Finally, in the area of personal freedom, the overall score was .8. The subsequent discussion and activities focused on how to change the culture of the workplace in order to facilitate coming together to implement a school plan.

Addressing The Plan

Teachers were then asked to recall aspects of the school plan. Only one element was offered: the move to a nongraded school. In fact, the nongraded organization constituted subsection A of objective one under the heading “methodology and management”; yet this was the only remembered component. When the discussion began to identify ways that teachers believed they had decided to implement such a change, open conflict developed. Teachers expressed considerable resentment and hurt over meetings and decisions which some believed had been conducted in secret. Others were equally adamant that the responsibility lay with those who chose to arrive late or to not attend staff meetings at all. (This discussion led to a short-lived commitment on the part of all members to make staff meeting attendance a top priority for the rest of the year; apparently it broke down for the next meeting.)

Agreement concerning what had been decided was not possible; thus teachers and principal agreed to begin again, to identify those things about which agreement could be achieved, and to progress from that point. Discussions focused on how to organize for

instruction, which teachers would work together, which might “opt out,” and on the topic of whether and how to integrate Native culture into the curriculum. Although progress was made in terms of surfacing tensions and underlying assumptions which had festered for some time, the day ended with the plan in some disarray and few concrete decisions to replace it. Indeed, towards the end of the day, the special education teacher, (constantly at odds with the others), asked, “What place is there for me in a nongraded school?”

Clearly both increased commitment and more planning were necessary in order for any restructuring to occur. During the summer, teachers were expected to participate in a one-day inservice session planned by the district school improvement committee. Teachers first gathered to listen to a keynote address, then participated in small group sessions designed to provide an orientation and introduction to the three major topics of the district plan. Although attendance was expected, teachers were not compelled to attend and several teachers from Red Cliff School chose not to participate. Subsequent staff inservice activities planned at the school level for teachers also failed to achieve 100% attendance. Indeed, a workshop related to instructional strategies for teaching thinking skills and problem solving was attended by only the principal and four teachers (one of whom came from another school). Red Cliff teachers who were present at that session expressed excitement about activities presented earlier in the week during a workshop with educators from another school district. They also shared a decision to eliminate student report cards until a student left the school building and to replace the traditional reporting system with more authentic assessment involving portfolios. In addition, they had agreed to implement a school organizational plan with a variety of placement options for students. The participating staff expressed concern about the anticipated responses of the staff not in attendance, but stated that they were determined to implement their plan whether or not there was unanimity.

Thus, the planning process of Red Cliff School occurred in several stages. The development of the plan seemed to be brief and smooth, but was completed by an “outsider,” largely without the ownership and commitment of the staff. Nine months later, as the time for implementation and summer inservice approached, teachers became aware that the plan would neither implement itself nor disappear, and several staff meetings and additional meetings were scheduled in an attempt to develop understanding, communication, and strategies for implementation of the plan.

Implementation Progress and Problems

By the time school opened for the subsequent year, a number of changes were in place. Pauline had resigned during the summer and had been replaced by a teacher who was reported to “fit the facilitator mode well.” The peer coach had been hired on a half-time basis for the entire year and, according to the principal, was “doing wonderful things” in the area of group processes and teaching strategies. Class assignments reflected a desire to reorganize. Thus, traditional classes existed at the K, 1 and 2 levels, while there were two grade 3-4 groupings, one grade 5-6 group, and two grade 3-6 classrooms. Teachers persisted despite the difficulties of unfamiliar circumstances in multi-grade, multi-age classrooms. The plan to eliminate report cards was modified; teachers agreed to combine the continued use of report cards with the implementation of portfolios and authentic assessment for reading and writing activities. Planning was continuing with one new initiative in an early stage: a pre-school for special education students. In addition, a previously identified need, more parental and community involvement, was being spearheaded by a few parents determined to establish a parental advisory committee.

Analysis

The analysis of the planning for restructuring at Red Cliff School indicates both strengths and weaknesses. These will be examined briefly according to the framework previously discussed.

Restructuring and Nongradedness

A major strength of the Red Cliff School plan lies in the decision to focus in practice, if not on paper, on students and the classroom, and to adopt a flexible organizational approach adopted from studies of nongraded schools. In this way, teachers have indeed progressed in their ability to focus on individual differences, to enhance student autonomy, and to implement a variety of instructional approaches and teaching strategies, as well as innovative assessment measures. Yet, the initial decision to eliminate report cards seemed too radical to implement without the support and involvement of all the teachers and the wider community. Further, the change might have been more acceptable if desired student performance outcomes had been identified from the outset.

Planning As Conceptualization

It is here that the planning at Red Cliff School broke down. Although teachers unanimously expressed willingness to change and to innovate, there was confusion over what was intended, what had been decided, and about the expectations of the school. No vision or philosophical framework, overall direction, or specific goals had been identified. Means and ends seemed confused. Neither the journey nor the destination had been clarified.

The lack of teacher awareness concerning the district plan enhanced the difficulties. Wise (1990) identifies restructuring as one of the steps to teacher professionalism; however, it must be accompanied by participation in planning and in decision making. Further, a school plan developed largely by an outsider without consideration or awareness of teachers' concerns or practices seemed doomed from the outset. Early recognition that implementation of the plan seemed to leave the special education teacher without defined duties might have enabled satisfactory resolution of the situation.

The Continued Quest for Balance

The lack of conceptual coordination and pressure at the district level results in a noticeable gap between what the district intended and what actually happened in this school. Although the district had specified local autonomy and control of planning, there was no accompanying pressure for plans to take teacher differences into consideration. At a district level, it was intended that schools develop their own inservice plans, and that individual teachers were free to choose workshops and planning activities useful to them; however, there seemed to be no monitoring or pressure to ensure that all teachers were in fact making wise choices consistent with advancing the total plan. Again, the findings of Fullan and Newton (1988), and Shields (1991) that support must be accompanied by adequate pressure and monitoring are confirmed. In the absence of either overall vision or defined linkages, we noted considerable difficulty in agreeing on and implementing a school plan.

Culture: An Ongoing Factor

There were numerous indications, generally recognized and willingly expressed by the teachers themselves, that the culture of the school was problematic; yet, planning proceeded without addressing this issue. Indeed, the culture gap survey suggests that in general, teachers feel that more task support and more support for innovation would enhance their workplace

culture, while some expressed a strong need for less personal freedom. Although social relationships overall fall within the acceptable range, there is obvious discrepancy with individuals scoring from 0 to 4 on the scale. Finally, in the area of personal freedom, the overall score of .8 might seem to indicate a high degree of congruence between the freedom perceived as desirable and the existent state. Nevertheless, in this area, three negative scores were registered indicating that some respondents perceived a strong need for less freedom, and for norms which would encourage more compliance and more loyalty to the school. Potential for conflict is high. School culture will need to be addressed if planning is to be successful.

The dominant culture of the environment also needs to be considered. The Office of Civil Rights has mandated a district "corrective action plan" to address the linguistic needs of the students. Little has been done in this regard and teachers remain sharply divided over whether or how to integrate the Navajo culture into the school program. Some reported that parents believe this is their domain; others are concerned that any attempt to ignore the dominant culture results in teaching in a vacuum and makes the curriculum irrelevant for the students.

The Nature of the Plan

Additional difficulties may be identified concerning the relationship of the plan to the real activities of the school. If, after nine months, teachers could only identify one topic of the plan, it is obvious that it fell far short of a document which would provide a unifying vision, purpose, or direction for the staff.

In addition, when teachers took the time to examine the actual plan which had been developed, they were aware of some strange inconsistencies. Under the general topic "Parent Involvement" for instance, objective four stated that "parents will have ownership in school functions." Although teachers had identified a lack of parental involvement as a concern during one session with the writer, they were unsure how to increase such involvement. Teachers were, however, certain that specifics like "A. Mail important announcements" or "E. Parents allowed to attend staff meeting" would do little to accomplish the goal of ownership.

Instead of an eight-page plan which covered everything from the planting of trees and shorter bell rings to authentic assessment, whole learning, computers, and day camp, a less detailed plan which could truly guide teachers in their quest to better serve students might have been desirable. Indeed, some issues omitted from the plan such as how to increase parental involvement or how to handle the issue of culture might have provided a more useful focus. McLaughlin (1992) states that "pedagogical solutions have overwhelmingly stressed skills, to be sought one after another, sequenced . . . and fundamentally removed from the politically charged contexts" (p.3). Red Cliff School also seems to have ignored the question of political culture and the way in which traditional schooling may "marginalize and silence subordinate groups in society" (McLaughlin, p.3).

The Absence of a Learning Community

The previous discussion indicates that despite the comprehensive study and planning efforts of the district, Red Cliff School was not well prepared to develop a strategic plan. That the eight-page plan had been developed with little participation, and even less commitment and team building, suggests that the emphasis had been more on the production of the plan than on the process of planning. The need for considering and incorporating the complex culture of a school situated in a multicultural situation with conflicting norms and expectations had not been addressed. Indeed, virtually none of the principles identified earlier and espoused by Senge (1990) may be found in the planning processes of Red Cliff School. If restructuring is to consist of more than items on a paper plan, it would appear that serious attention needs to be turned toward Senge's five disciplines. A systems approach might remind all concerned of the

important cultural factors necessary to implement change for Native students. Time spent helping individual teachers to build confidence, and a sense of personal mastery would be well spent. If mental models of nongradedness had replaced the general confusion, then team learning and shared vision could have been developed. The finger pointing and assignment of blame which are certainly not conducive to successful implementation of planning initiatives might have been eliminated.

Issues for Further Consideration

In spite of conflict, tension, and false starts, a number of major innovations have begun to be implemented at Red Cliff School. The vision and support offered by the district have provided enough inservice time and money to permit a few teachers from the school to become planners, decision makers, and early implementers. Yet, this brief glimpse of the convoluted and difficult process which in fact began, not with the development of the school plan, but with the realization that the time was at hand to plan for its implementation, raises a number of issues for those involved in educational planning. In the interests of space, these issues will be raised briefly without detailed elaboration.

The Planning Team

If the development of a team and the building of commitment to a shared vision are as important as Senge (1990) and others suggest, educational planners will have to seriously focus some attention on this aspect of the process. Questions such as who should constitute the planning team at the local level, and what role should be played by those outside the school in the development of a plan will need to be answered. The district had provided for the assignment of a peer coach to Red Cliff School for the current academic year; yet, the coach had not been involved in any planning or team building activity. To what extent can an 'expert' be effective if she is not included in the planning process?

The Role of the Plan

Patterson, Purkey, and Parker (1986) emphasized masterful planning rather than the plan itself. Yet, the plan must provide some broad guidelines and establish direction if it is to be useful. How can one ensure, during a planning process, that the plan will provide appropriate guidelines for action or that it will address central and significant rather than peripheral issues? Perhaps Senge's (1990) concept of mental models and personal mastery could help to inform this part of the process.

Implementation of a Plan

If implementation of a plan is to occur, a number of writers (Fullan, 1991; Miles, 1983; Berman, 1981) agree that there is a need for teachers to become "skilled committed users." There seems to be a need to link outside pressure and support with internal monitoring to prevent teachers from "opting out" of the development process. Indeed, with more school districts granting autonomy or site-based decision making powers to individual schools, planners will need to address the question of how to reconcile local autonomy with the fulfillment of district goals.

The Leadership Role

To what extent can successful planning occur if the principal is perceived as non-effective? As the emphasis in education moves from a hierarchical to a more collaborative organization, there is a need to find new ways to encourage and develop teacher leadership.

Kaufman (1992) shares “a basic secret” for success: “to find the correct destination for the system before tinkering with the internal parts and resources” (p.6). Bailey (1992) goes further in affirming that “restructuring requires rethinking. Restructuring requires a shift in paradigms” (p.16). Development of these capabilities among a school staff are fundamental leadership roles necessary for effective educational planning.

The Relationship of Culture

Questions have been raised concerning the relationship of school culture to planning initiatives. To what extent does a dysfunctional culture inhibit planning? In what ways does community cultural diversity affect the planning process? To what extent does voice, the input of those standing “in a different place” become important in the development and implementation of plans? Further, how can one ensure that the dominant cultural voice is not silenced by the political majority? These questions have been peripheral to educational planning efforts for some time. They will have to become more central in educational planning for the next century.

The Question of Complexity

Finally, the perennial question of how to plan for complexity and ambiguity, while at the same time providing guidelines which will enhance the learning environment of students is open. How can the role and function of the plan itself be reconceptualized in order to better meet the needs of a restructured education system? Educators will have to become comfortable with change. Indeed, planners themselves will have to learn to accept ambiguity as a given, total control as a myth, and a plan as just one flexible but important aspect of improving our education system.

Towards a Major Overhaul

The superintendent in charge of the restructuring grant for this school district stated that a “major overhaul” of the education system was required. To that end, the district procured funds to enable schools to identify and address the specific needs of their populations. To the extent that Red Cliff School was able to link its restructuring efforts to curriculum and classroom activities, students may be positively affected by the changes. To the extent that the planning for restructuring ended with the development of a plan and ignored planning for cultural involvement, for implementation, for consensus building and teacher leadership, lasting effects seem to be doubtful. Nevertheless, the jury is still out. If Red Cliff School can capitalize on the additional inservice funds which the system provides, and if teachers will work together to unify the efforts of the community, the school personnel, and the internal and external consultants, a major overhaul may yet occur. Teachers may become facilitators, authentic assessment may be implemented, and a positive school climate may develop. If these are to become foundational elements of a restructured school, planning efforts will have to become more holistic, more integrated, and more sensitive to political, cultural, and ethical questions associated with meeting the needs of at-risk students.

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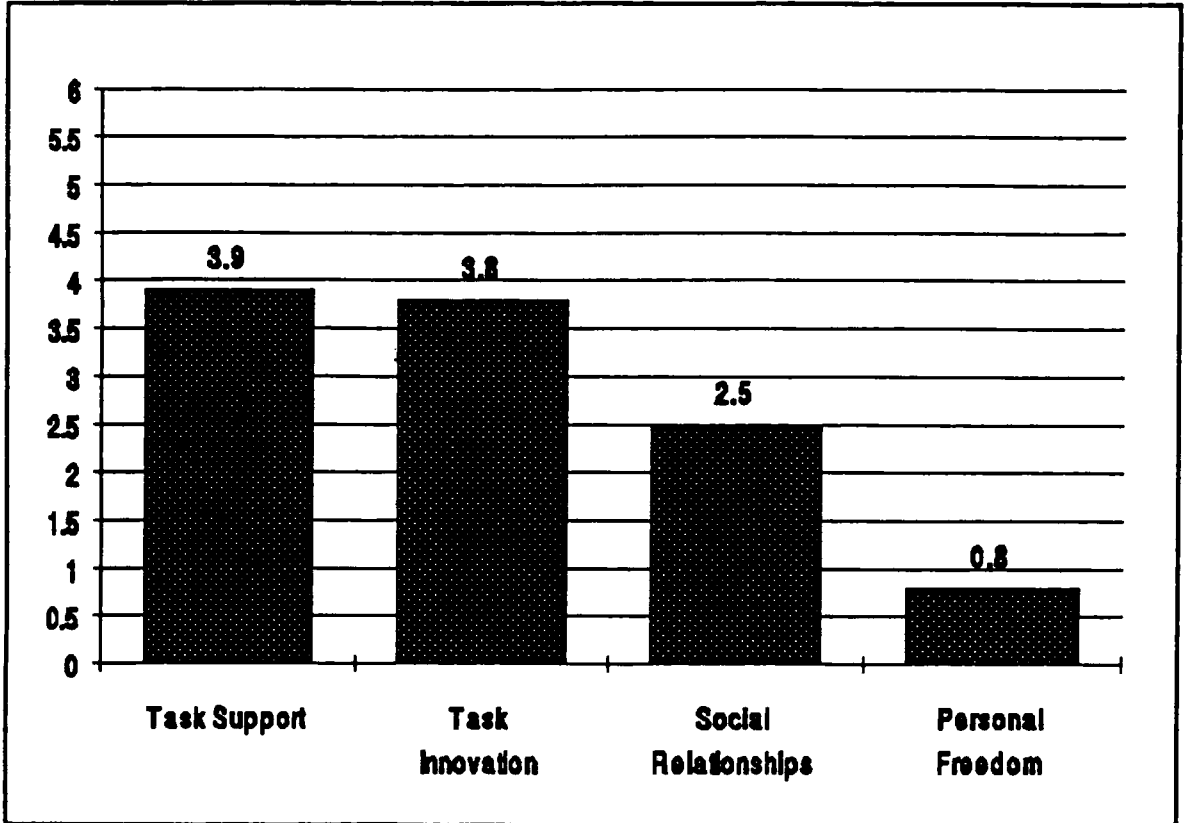
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Appendix A

A Profile of the Culture Gap at Red Cliff School



Cultural Leadership: The Culture of Excellence in Education

William G. Cunningham and Donn W. Gresso

Boston: Allyn and Bacon, 1993, 285 pp. (\$40.95)

Review by Lisa DeMeulle

University of Memphis

As an educator directly involved with educational reform at the school level, I began reading this book with great anticipation. I wasn't disappointed. Cunningham and Gresso have created a framework which can enhance one's understanding of the complexities associated with developing a culture of excellence in education. Rather than offering a "how-to" book, which might oversimplify and undermine the importance of the subject, the authors build a convincing and logical argument for cultural leadership. By providing a variety of real-life examples from programs around the country, the authors pull the reader into the text to experience the discussed concepts from multiple perspectives.

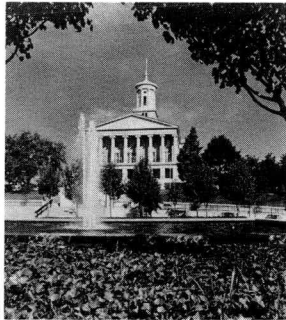
To create a context for later chapters, the book begins with a thorough review of educational reform movements at the national level. The 1980s saw the initiation of a second wave of school reform that focused on improving education by investing in the experience and knowledge of educators, and by decentralizing and professionalizing teaching. As a result of this movement, many schools have begun to explore alternative school structures, such as site-based decision making, as a means of realizing this type of reform. The authors, however, take the next step and recommend that successful educators need to spend more time developing the culture of the school workplace, instead of expending efforts on developing structure and hierarchy.

According to Cunningham and Gresso, culture "...in its most basic form is an informal understanding of the 'way we do things around here' . . . culture is formed as we observe, listen, talk, and interact with others in our organization" (p. 30). In advocating culture over structure, several themes emerge as being key, the most important of which appears to be vertical integration of members in the organization. The authors state, "The vertical team concept was developed to meet this need for interrelatedness, interdependence, and interaction among various levels of the organization. The purpose of the vertical team is to allow for the important exchange of information among individuals who share a common purpose but operate on different levels and who thus have very different organizational perspectives" (p. 54). Vertical team leadership uses collective vision as its guide and has a growth and development orientation, while traditional horizontal leadership tends to look at problems and solutions as part of the decision-making process, and has an orientation toward safety and security.

What impressed me most about this book was its focus on the human aspects associated with cultural leadership. While grounding their discussion in theory, the authors take time to focus on the practical issues associated with leading people instead of systems: vision; collegiality; values, interest and trust; personal and professional development; and employee empowerment. The last two chapters, *School-University Partnerships* and *Transforming School Culture*, gave me the information I needed to begin applying the principles discussed in earlier chapters. As a professor involved in a school-university collaboration, I was motivated and enthusiastic to share the ideas presented in the book with others in my partnership.

The strength of this book lies in its thorough integration of many concepts, educational trends, and programs which the authors so easily bring together into a coherent whole. Drawing on aspects of business, such as OBE (outcomes based education), a compelling argument is created for cultural leadership as a means of facilitating educational excellence in schools.

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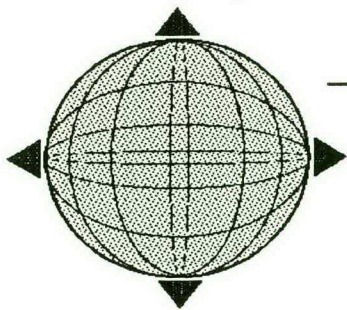
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