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ABSTRACT

A rationale for school-based evaluation, criteria for a sensible evaluation and assessment system, and a systematic process for implementing an evaluation and assessment system are presented. School-based evaluation can be used as a management tool and a means of improving aspects of teaching. Sensible evaluation must be aligned with school goals, encompass a variety of indicators, provide explanatory power, assess progress over time, focus on both short-term and long-term targets of change, use valid measures, attend to unanticipated side effects, involve collaboration with program designers and implementers, and respond to accountability and monitoring concerns of local school districts and states. The six-step systematic process covers evaluation focus, information requirements, management of instrument development and data collection, collection and analysis of data, interpretation and communication of findings, and use of findings and monitoring effects of resulting changes. The following aspects of schooling, which help identify school quality, are described: student outcomes, curriculum, instruction, school climate, staffing, and parent-community relations. Six figures and two tables are included. Appendices include typical evaluation questions, sample survey instruments, a hierarchical list of school data useful for evaluation purposes, formats for using and displaying data, and a sample report to parents. (TJH)

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Sensible School-Based Evaluation

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School-based management and school restructuring reforms bring with them both special challenges and new opportunities for evaluation and assessment. The challenge is to configure evaluation strategies sensitive to the unique needs and priorities of individual schools, and to provide information sensitive to the goals and processes they are trying to achieve, and credible to those charged with monitoring progress. The opportunity lies in the inviting context which school restructuring and school-based management offer for the actual use of evaluation information to aid school improvement. This resource paper presents a rationale for school-based evaluation, the criteria which a sensible evaluation and assessment system should meet, and a systematic process for conducting it.

Why Evaluate?

Evaluation: a management tool. At the site level, evaluation serves a variety of purposes: sound educational policy making; improved program planning; and more effective school and program management at all levels of the educational hierarchy. Evaluation activities provide information for decisions touching on every aspect of school management:

- identification of school problem areas or needs for improvement
- identification of priorities for the allocation of limited resources
- planning change initiatives
- identifying areas of strength on which to build
- fine tuning programs
- promoting and documenting school effectiveness

In many respects site level personnel, principals, counselors, program assistants, teachers and aides are constant but unconscious evaluators. In the course of their daily work, school staff make decisions based on informal data gathering strategies, then assess the adequacy of those decisions with further data, both formal and informal.

Aspects of teaching. Teachers use informally gathered information about student attitudes and preferences combined with student performance on tests, projects, and other classroom assignments to form judgments about the entire range of classroom management:

- planning lessons
- assigning students to groups
- diagnosing individual learning problems
- monitoring student progress
- assessing subject matter mastery
- identifying students in need of remediation
- planning remedial or enrichment activities
- fine tuning instructional strategies

School based management and restructuring, by placing more authority and responsibility at the school level, places more emphasis on the evaluation activities now conducted in schools and while shifting accountability responsibilities from the district to the site. Suddenly, constituencies who could be referred "downtown" for information must be addressed by site managers and staff. This shift in accountability has the effect of forcing school staff to formalize and make public both their decision-making processes and the information upon which their decisions are based.

Despite the increased evaluation responsibilities accompanying school restructuring, the transition from implicit to explicit evaluation as a basis for school decision-making can yield unexpected returns to site level decision-makers. First, a formal, public program planning, monitoring, and improvement process can assure parents that their chosen school is dedicated to meeting the needs of their particular children. Second, school-based evaluation can improve the quality of information used to make management, program and instructional decisions. A formal, or at least more explicit, evaluation process, because it takes staff time and resources, generally forces staff to focus on the more important decisions, ask clearer questions, and provide more reliable and valid data than decision-making made by individuals in the privacy of their classrooms or offices. Third, school-level evaluation activities can

provide parents and district level administrators with concrete evidence of improvement and quality. Further, data gathered at the school site for the purpose of school-level decision-making, unlike data gathered through district or state assessment-evaluation programs, can be timely and relevant to local needs. In this age of declining resources for our schools coupled with almost unrelenting demands for "higher quality" education, this last benefit is of no small consequence.

Beyond the variety of ways in which evaluation can contribute to school planning and improvement, *sound* evaluation and assessment data also respond sensibly to important realities for schools: mandated accountability and public information requirements. *Sound, sensible* assessment and evaluation can help schools communicate in credible terms what they are trying to accomplish and how well they are accomplishing it Customized to school needs and priorities, evaluation can be a natural ally in school restructuring.

But "can" or "could be" is not the same as "now is." Evaluation has strong, potential utility, but its promise has generally exceeded its delivery. Evaluation is too often identified as merely "testing." This narrow definition has led to some current problems in evaluation practice.

Some Problems in Current Evaluation Practice

Chief among the reasons for evaluation's limited utility at the school level has been the source and nature of formal assessment practice over the last three decades. Imposed

from top down, standardized tests have been seen as the key measure of educational quality, satisfying the information needs of legislators and administrators at the federal, state and even local levels who wished to know how mandated and other special programs were working and how schools were achieving. The people in the schools, teachers and local administrators--until now--have been seen primarily as data providers rather than data users, as implementers of reform efforts rather than initiators of such efforts.

Teachers and local program designers, meanwhile, have long raised serious questions about the validity of these "top-down" assessments, arguing that required tests are not well matched to their program goals, do not reflect what they are teaching and, moreover, are inappropriate for particular groups of students (Herman and Dorr-Bremme, 1983, Herman et al, 1990). They have been joined by some in the research community who also have questioned the value of standardized tests (Baker, 1983; Eisner, 1985; Sirotnik and Burstein, 1984). The most widely cited critics of standardized testing practice assert that current standardized tests:

- provide a very limited view of educational quality;
- examine student performance on only a narrow slice of the curriculum;
- generally emphasize basic skills at the expense of learning in the content areas and higher-order reasoning skills; and

- are silent on the multiplicity of other academic, social, and vocational goals which schools are supposed to address.

The meaning of improvement in standardized test score performance, furthermore, has been opened to serious question (Cannell, 1989; Linn et al., 1990): Do increased scores denote improvement in important student learning and achievement or do the scores reflect curricular narrowing and teaching to the test? The validity of current measures of student achievement for assessing educational quality and its effects, in short, is seriously questioned.

But even if credible testing instruments were available, more broadly-based tests were administered, and the results were sensitive to local social/economic/community context, assessment would not be synonymous with evaluation. Test scores alone, or any other student outcome information alone, even under the best of circumstances provides only a partial picture of school quality, incomplete for the purposes of educational planning and school decision-making. Tests cannot provide full answers to important questions such as, what are the reasons outcomes are as they are? What parts of the school program are working well, which are not? Which students are benefiting most, which need greater attention? Why? Understanding the processes and context features which create or contribute to school outcomes is critical to directing an effective agenda for program or school improvement.

The above analysis suggests some of the reasons why evaluation, thus far, has had only peripheral influence on teachers, principals and district personnel in their efforts to improve programs and schools.

To summarize:

- evaluation has been primarily linked with "top-down," highly centralized improvement approaches which were not necessarily sensitive to "bottom-up" needs;
- evaluation data has been derived primarily from standardized tests of student achievement which examine only a narrow range of outcomes;
- evaluation has given short shrift to crucial variables in the context and process of schooling.

And most importantly, evaluation information alone cannot solve problems; only thoughtful and empowered educators using evaluation as a tool to inform their decisions and actions, will solve problems.

Building a Better Approach

This litany of problems in current evaluation practice contains the roots of a more productive model, one which can better support restructuring and school-based planning. What are its features?

1. Sensible evaluation is **well aligned** with the school goals and priorities. It uses tools and assessments that match what the school or program is trying to accomplish and focus on what people agree are the most important goals.

2. **Sensible evaluation encompasses a variety of indicators** of school quality and student accomplishment. Because schooling is a complex process with complex outcomes, its quality cannot be captured by a single score on a single test or single test battery. What is needed is a variety of measures, assessing:

- a range of outcomes
- important dimensions of school/program/instructional process
- key aspects of school context and demographics

3. Sensible evaluation has **explanatory power**: When an evaluation or information system includes data on school and community context and on educational process as well as outcomes, we can examine inter-relationships among those elements to help us understand why things are as they are. Without such examination, evaluation cannot really clarify the nature of program strengths and weaknesses nor help direct improvement strategies.

4. Sensible evaluation examines progress over time because measurement in education, as in most fields, is inexact, subject to error as well as influence from a variety of factors, and is not conducted under pristine experimental conditions. Conclusions based on single data points are unlikely to be reliable. Judgments of success about innovations are much stronger when the analysis looks at trends several years before and several years after the change. The use of an extended

time frame also responds to the reality that change generally is slow: it takes time to get new approaches up, fully running and producing results.

5. **Sensible evaluation focuses on both the short and longer term targets of change.** Educational programs are based on theories of action, often implicit. These theories define what actions are necessary to reach ultimate, desired outcomes--i.e., improved education for children. Sensible evaluation focuses both on the present actions as well as the ultimate outcomes. For example, one school's plans might be based on the premise that a whole language approach to instruction will improve students' language acquisition. The ultimate target of the program is student language performance, a target which realistically may not be dramatically affected for several years. However, what needs to happen in the meantime? Concerted and comprehensive staff development needs to occur. New materials have to be acquired. The desired whole language approach actually has to be implemented. Evaluation needs to give attention to the critical features of the theory of action underlying this innovation so that progress can be monitored and documented.

6. Sensible evaluation uses **valid measures.** Validity is the extent to which assessments actually measure what they are intended to measure. For our

purposes, valid assessments are aligned with critical features in local school context and process and important local outcomes. Because the validity of available measures is only approximate, with some measures more open to question than others, the imperfection of our current methods argues that we use multiple measures to triangulate on important outcomes.

7. Sensible evaluation is attentive to **unanticipated side effects**. While we push to accomplish on intended goals, we need to make sure we're not falling behind or causing havoc in others. If, for example, our primary goal is raising student achievement, we might want to be sure that gains are not coming at the expense of student attitudes. Are students learning to be good decoders at the expense of enjoyment of reading? Or another example, if a project works through a special group of teachers, are there negative side-effects on relations with other teachers? Negative side effects, when found, indicate areas in need of attention. Positive side effects, on the other hand, add evidence of the value of a program.

8. Sensible evaluation is **formulated in collaboration** with program designers and implementers. If evaluation is to be both a valid and useful activity, it is critical that it be designed with input from those who both know the program best and are in a position to use the results for improvement purposes.

9. **Sensible evaluation, while maximally responsive to the needs and concerns of local educators, is at least minimally responsive to accountability and monitoring concerns of local districts and states.** Sensible evaluation provides information on general indicators while accumulating credible data to document progress on specific local goals.

Evaluation is on the one hand a complex endeavor and on the other a straightforward, common sense inquiry process. It attempts to answer simple questions: how is our school(s) doing? Is a program working? Why? While technical design is important, at least equally important is the sensitivity of measures to program processes and goals. Local educators should recognize that the best indicators of their effectiveness will come from rigorous, creative thinking about what they are trying to accomplish and how they are planning to accomplish it.

Where to Start?

Because the evaluation process requires administrator and staff time, the scarcest commodity in schools, decision areas to be informed by evaluation should be carefully and thoughtfully identified. While no general principle exists by which we can say, "we should conduct an evaluation in this particular circumstance," the questions below might help identify those decision contexts where evaluation is essential:

- Is this a high takes decision? Are many students/teachers affected by the outcome of the actions taken?
- Do I need highly credible, or even legally defensible, information to support this decision?
- Do we need to know how a program works and why it produces the effects it does?
- Is my funding contingent on providing information to describe a program or its effectiveness?

Concurrent with the identification of areas where evaluation activities are necessary, should be identification of the stakeholders for the evaluation--those groups expected to act on evaluation findings and others affected by or likely to be interested in its results. Stakeholder groups may include teachers, administrators (site, district, state, or federal), parents, students--or specific subpopulations such as--board members, the business roundtable, civic groups, or realtors. It is important to involve stakeholder representatives early and often in the evaluation process. Their involvement will help to build consensus, or at least common understandings for negotiation, about decisions to be made from evaluation findings. Involving stakeholders will promote the credibility of findings and will increase the likelihood that findings will indeed influence action. The involvement of stakeholders not only increases "ownership" in actions taken based on the evaluation but also increases the pool of help available in defining questions, focusing the

evaluation, gathering information, and understanding findings.

A Six Step Process to Improve Management Decisions. Once a staff is satisfied that there is a need for an evaluation and has identified relevant stakeholder groups, it is ready to implement the systematic decision-making process we call "evaluation." In this guide, we conceptualize evaluation as a six step process. While others have suggested a different number of steps, ours shares with many evaluation models a number of common features: a process for clarification of decisions, questions, issues, or goals to guide decision-making; a reliance on multiple data sources and externally verifiable data and belief that data will indeed result in a better decisions.

Steps in the evaluation process are neither linear nor fixed. Steps may be taken simultaneously, and there is often an interplay between steps, with information from one changing activities or decisions made at another. Like all problem-solving strategies, the evaluation process is recursive. An insight gained in one step might cause a rethinking of the evaluation questions or revise data gathering instruments. A review of results may shift the focus of the evaluation or suggest additional or more important questions. And data collection, analysis and reporting may occur over a very short time period so as to appear almost simultaneous.

In our work at CRESST, we have found the following steps to be useful in guiding our evaluation activities:

1. **Focus the evaluation:** Determine the purpose(s) of the evaluation--the decisions that must be made, the possible audiences or people affected by these decisions, and questions we might ask that would enlighten our decisions.

2. **Identify information requirements:** Determine what information we might need to answer our questions or better understand the consequences or our decisions. Make initial decisions about the kinds of instruments needed. How will information be collected? Will there be interviews? Observations? Focus groups? A review of extant data? Student work samples? Standardized test results?

3. **Plan how to manage the instrument development and data collection process:** Determine from whom we need information and when. Make a plan for instrument development if necessary. How long will it take? Who will collect information? What will it cost in time and resources to purchase or develop, and administer instruments?

4. **Collect and analyze information** to answer evaluation questions. Organize information, summarize, look for patterns.

5. **Interpret and communicate findings:** Work with stakeholders to "make sense" of findings and conclusions

in light of shared experience and possible conflicting interests.

- Look for trends over time to identify strengths and areas for improvement.
- Look for relationships among variables to explain findings.

Negotiate a common understanding of findings and possible courses of actions related to findings. Report results in ways that are useful and clear to stakeholders and interested audiences. Use different methods to match needs of audiences, from informal meetings to formal written reports, from panel discussions, to authoritative presentations.

6. **Act on findings and monitor consequences** of these actions. At this stage we are implementing policies, programs, decisions suggested by our evaluation findings. The implementation effort itself may call for continued evaluation activities to monitor progress or effectiveness.

The remainder of this guide takes you through each of the steps in the evaluation process and provides examples and exercises to help you develop your evaluation skills.

Step One: Focus the Evaluation

Although we have seen that evaluation can serve a number of different purposes, in the context of school based management and school restructuring, the primary purpose of evaluation activity is the monitoring and improvement of the

quality of school programs, or components of those programs. A secondary purpose is to provide at least modestly credible data about school progress to district personnel and the public. To serve these purposes, the evaluation focuses on issues related to how well a school is accomplishing its priorities, perhaps most easily expressed in the simple question: "How are we doing?" Deceptively simple and straightforward, yet related to nearly all aspects of school functioning, the "how are we doing" question subsumes a host of interrelated concerns of school staff: What needs should we be addressing? What changes in existing programs or innovations are required to meet these needs? Are we doing well enough? How can we do better?

Formulating specific evaluation questions.

Focusing an evaluation means identifying what we want to know--the questions we want to answer as a result of our evaluation efforts. While we have indicated that we will be focusing on the general question, "how are we doing?" our actual evaluation activities will be guided by more specific questions. These specific questions detail the particular aspects of school or program quality which most count for us. The questions are linked directly to the criteria we hold for judging our school and/or its programs. They let us know whether the answer to our general question is "we're doing well, we're not doing so well, or most likely, a combination of the two.

What should we be examining in our school to focus our evaluation and answer the "how are we doing" question. There is no single best answer to this problem, no single set of specific questions which will apply to all situations. What we should be asking about depends upon political and legal requirements, our educational philosophy, and our values. Nevertheless, certain aspects of schooling appear time and again as foci of school quality:

Student outcomes: achievement, attitudes, school completion, preparation for work/college

Curriculum: adequacy and effectiveness of educational materials, technology, resources; content coverage; coursework requirements, access by different student populations, alignment to state/school goals and assessments

Instruction: strategies, grouping, teacher role, classroom organization, student interaction, use of technology

School climate: consensus on school goals, expectancies for student achievement, relationships among and between students and teachers, pride in and satisfaction with school, administrative leadership, teacher empowerment, support for innovation, safety, student and faculty morale

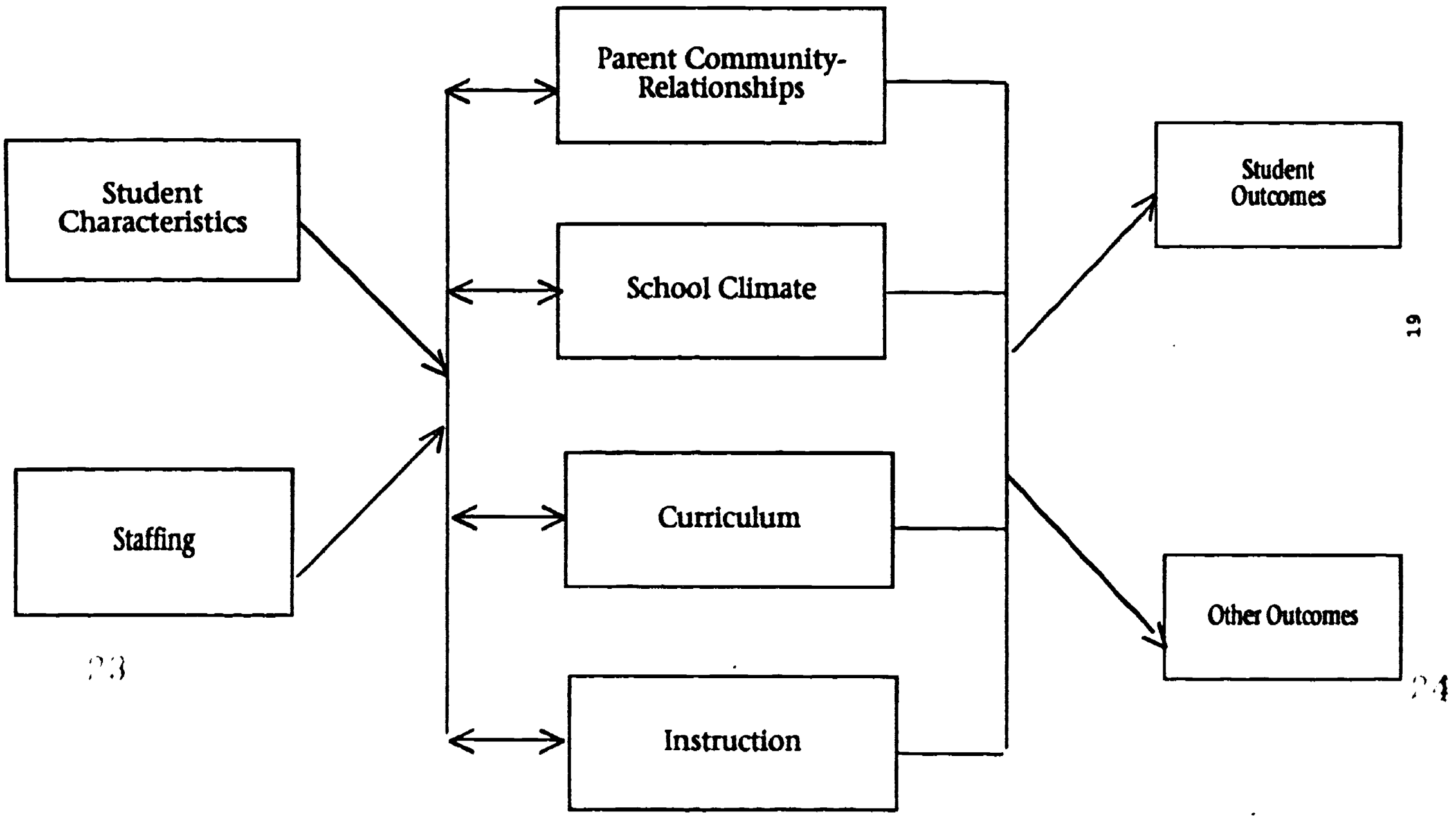
Staffing: staff preparation, training, currency of training, student-staff ratios, staff understanding of student population needs, staff demonstration of

required competencies such as being bilingual, understanding of mainstreaming techniques, understanding of curriculum requirements

Parent-community relations: attendance at school events, parent involvement with child's educational progress, understanding of school goals, support for and value of school, volunteer programs, financial support, business partnerships

It's sometimes helpful in generating questions to think about how all the answers may fit together to help you better understand how your programs are operating. One way to think about the inter-relationships is to think about how the various categories may fit together to influence student outcomes. Figure 1 shows one map of the inter-relationships. Here we see that student outcomes are thought to be influenced by school and instructional processes of climate, curriculum and instruction, which in turn are influenced by teacher background and training, parent involvement, and other student and school factors. If student outcomes are not as we want them, then we need to cycle back though these other areas to identify potential causes and design remedies accordingly.

Figure 1
A Process Outcome Model of Schooling



These aspects of school quality, and others like them, provide areas for potential inquiry. Obviously, it would be impossible to answer the "how are we doing" question for all of these areas at once. The problem in this first evaluation step is to establish priorities. It is during this step that we choose the areas of most importance to us and within them the topics of greatest relevance.

Your priorities will vary depending on where you are in the school or program planning process. If you need a general description of program strengths and weaknesses or need to know where your priorities should lie, the evaluation effort generally is known as **needs assessment**. In conducting a needs assessment, we often look broadly across all curriculum areas and programs to identify areas of general strengths and weaknesses. Having identified an area or two in which we are doing well, we may highlight this with our public or choose to share our successes with other professionals. Certainly, identifying areas of strength are central to the accreditation and school review process. At the same time, we may find an area or two where we have a need to improve. The needs assessment process enables us to look more deeply at these areas in a "diagnostic" sense and establish some priorities for program planning or revision.

When we ask the "how are we doing" question of change initiatives or of new programs or strategies we are trying to implement, our evaluation activities are called **formative**

evaluation. In contrast to needs assessment, in formative evaluation our program priorities have already been established and plans for addressing them made. Thus, evaluation activity is focused on how well these priorities and plans are being carried out and what effects are occurring as a result of program implementation. We want to know how well our change efforts are doing.

Typical questions for needs assessment. Needs assessments are integral and often required steps in program planning and in the development of school goals. The "needs" in needs assessment most often refers to student needs as determined by an examination of student outcomes. State and federal project funding (Title VII, Chapter 1, state technology grants) requires that schools "justify" their need for a project by presenting student outcome data pointing to "deficiencies" the project will correct. Typically, needs assessments present data related to basic skills achievement, but you need not limit your own questions to the areas of reading, language arts, and mathematics. Other areas can be surveyed, either because they are important problem areas at your school or because they represent a priority for you and other staff members.

An important aspect of needs assessment is the identification of the group(s) having the need. An examination of a school average scores may lead you to believe that you are "on track"; however, when you examine scores or outcomes for specific subgroups of students,

serious disparities in performance may show up. Some of these school subgroups are identifiable because students are participating in special programs, special education, Chapter 1, bilingual, or gifted education. On the other hand, groups of students such as those new to the schools, those from single parent families, [illegible]king students, girls (in mathematics and science), boys (in writing) may have performance patterns below the school average that would suggest that they have special needs. Posing questions about particular subgroups also promotes attention to equity issues.

But student outcomes, though important and frequently required for program planning, do not constitute the entire set of needs assessment questions. Areas of school improvement may exist in school climate, parent involvement, instructional quality, use of technology, or school image/public relations. A school might want to pose needs assessment questions related to these other aspects of schooling. Care must be taken, however, when asking questions related to the less quantitative aspects of school that questions are specific.

Questions we might pose in a needs assessment include:

- with regard to student outcomes:

  In what areas are students performing best? Worst?

  Are there differences in performance by students in special programs or by language, sex, or ethnicity?

  What areas of the program do teachers, students, parents feel are strongest? Need improvement?

- with regard to curriculum:

  Do course offerings and instructional minutes conform to district/state guidelines?

  Do curriculum offerings meet student needs?

- with regard to instruction:

  Do our instructional strategies need updating?

  Do classrooms provide equal access to the core curriculum for all students?

- with regard to school climate:

  Is there mutual respect and a positive working relationship among teachers, students, administrators, and parents?

  Do parents, students, and teachers feel the school is doing a good job?

- with regard to staff:

  Do teachers express a need for particular kinds of inservice?

  Do parents and others perceive that the staff is well prepared and effective?

- with regard to parents and community:

What do parents and community regard as the school's strengths? Weaknesses?

What opportunities exist for parent involvement and community support?

Typical questions for formative evaluation. When the evaluation task is to ascertain how we are doing in implementing change and what effects those changes are having, it is still useful to think the categories of information about school quality that focused our needs assessment--e.g., outcomes, curriculum, instruction, other school processes. Our choice of categories and questions within these categories, however, are tailored to the changes we are attempting to make. For example, if we have chosen as a school to convert to a whole language approach to improve students' reading and writing achievement, then we would want to pose questions about those things which have to happen for the conversion to take place. Formative evaluation questions we might pose include:

- With regard to teacher training:

  Has scheduled training occurred?

  Was the training effective?

  Have teacher's had follow-up assistance to help them implement new strategies in their classrooms?

- With regard to school climate:

  Is there leadership support for the change?

  Is there consensus on the need for change?

- With regard to instruction:

  Are teachers implementing the whole language approach-(and specifically what does it mean to implement a whole language approach; what do you expect to see teachers doing in instruction)?

- With regard to curriculum:

  Are there sufficient resources and materials to support a whole language approach (and what specific types of materials and resources)?

- With regard to student outcomes:

  Are students making progress on valued literacy outcomes: writing, reading, oral communication?

While the needs assessment questions are driven by a general process-outcome model, formative evaluation questions can take as a point of departure "here's what we trying to do, what needs to happen to make that a reality?" Usually, what we are trying to do is to make a change in school or instructional process. By devising a new program or revamping an existing one. We expect, at least in the long run, to improve student outcomes. In the short-run, these changes in fact may be aimed at improving the school climate or increasing parent involvement, improvements that in the long run are thought to benefit student learning. School improvement is a complex process. The literature on innovation and change in school suggests that for long term outcomes to be met, several intermediate steps should be taken. Among these are: teacher consensus on the need for

change and feelings of ownership of it; leadership support for the effort; adequate training and follow-up assistance on the specifics of what is to be implemented; teacher adaptation of the change to meet specific local needs; and of course whatever materials and specific resources are required to implement the change. These intermediate steps then, also represent areas about which a formative evaluation might ask questions.

Formulating your priority questions. You may find yourself interested in the answers to many more questions that you have the time, energy and the wherewithal to address. Nonetheless, at this stage, freely brainstorm the specific questions of interest with regard to student outcomes, school and instructional process. (Worksheet 1 provides a structure for your formulations.) Then go back and decide which are these should be given priority. Choose three or four such questions at this point. You may find as you go through the steps of the planning process that you have been over or under-ambitious; focusing on 3-4 questions will help you to adjust accordingly.

How do you decide which questions are most important or should be given highest priority? Again, there are no right answers. Outcomes included should be those which are highly valued by you and other significant stakeholders. Choose to pay attention to process and its prerequisites (climate, curriculum, instruction, parent involvement, other school initiatives, training) based on those which are:

- Most essential to program success;
- Most complex/difficult to accomplish;
- Most costly/resource intensive;
- Controversial; and/or
- Related to more than one valued outcome

Worksheet 1: Focus
Evaluation Focus and Priority Question

Questions	Priority Rating			
	Low	Medium	High	Manda-tory
Outcomes				
Curriculum				
Instruction				
Climate				
Staffing				
Parent/C mmunity Relations				

Step Two: 2. Identify Information Requirements

Having identified priority evaluation questions in step one, the task in this second step is to determine what information we need in order to address each question.

Brainstorm alternatives. Consider the specific kinds of evidence which could be used to provide objective answers. To do this, for each question you'll want to:

1. Think about and specify the **specific qualities or specific changes** you expect to observe if you're doing a "good job" as a school or in implementing changes, e.g., improvement in student achievement, higher attendance rates; more orderly, clean, and tranquil school campus; more students prepared for and pursuing college; specific changes in classroom transactions; better student performance on specific kinds of tasks.

2. Consider where there are **existing bases of information** that can be used as evidence. E.g., test scores, attendance rates, grades, incidence of vandalism, suspensions, number of students taking the SAT, student performance on class assignments, final exams. Table 1 lists some of the indicators which typically can be constructed from data available at schools.

Table 1

SAMPLE PROGRAM EFFECTIVENESS INDICATORS

I. Results of required external tests

- A. District standardized tests *over time*
- B. State assessment *over time*
- C. Other external tests (ACT, SAT, PSAT, AP)

II. Results of Department/School Testing

- A. Final examination results
- B. Grade analysis (Subject & Behavior)

III. Analysis of Awards and Interscholastic Competition Performance

- A. Academic Contests
- B. Artistic Contests
- C. Athletic Contests

IV. Analysis of Behavior and Discipline Statistics

- A. Attendance Patterns
- B. Discipline Patterns
- C. Dropout Rate
- D. Suspensions
- E. Expulsions

V. Analysis of Constituency Satisfaction

- A. Parent Perceptions
- B. Teacher Perceptions
- C. Student Perceptions
- D. Graduate Perceptions

VI. Analysis of Post-school Success

- A. Preparation for/success next level
- B. Post secondary placement

3. Consider other possible information sources. **Who is in a good position to know about quality issues** or about whether changes have actually occurred? E.g. parents, students, teachers, community members, local businesses? Consider how you can get the information you need from these information sources:

a. administer **questionnaires** to teachers, parents, community members, students, etc., using structured or open-ended questions.

b. conduct **interviews** (face to face or by phone) or focus groups (small group interviews) with appropriate respondent groups, using structured and/or open-ended questions.

c. administer to students (and/or others) **attitude measures or other inventories** that are available commercially or elsewhere in the field

d. conduct **observations**, using structured protocols, checklists, or other

e. access **existing records** (school records--student, library, purchasing, other social agencies, public departments)

Creatively brainstorm about what you could observe, who and what we could ask, what existing records we could tap, what new records we could have kept, what pictures we could take, what things we could count, etc.

to help us get us credible information to answer each question.

5. Plan to **use more than one source** of evidence for each question. This will increase both the validity of your findings and their credibility to various audiences.

Keep in mind how you will judge information. As you consider what kinds of information you need to collect, you also need to keep in mind how you will judge whether the answers to your questions are positive. What standard will you use for judging effectiveness and/or success? There are a number of possibilities.

a. Look for change over time. Are students' achievement test scores, after adjusting for changes in student population or test norms, getting better or worse? Are they better than they were before our efforts started? Are parents more satisfied and comfortable with local schools than they were? If change over time is an important issue, we need to know where we stand on each question at some prior period--or prior to the start of a new program, and then repeat our assessment periodically over time.

b. Look for improvement relative to some comparison group. Are our students' achieving at the same level as students in other similar communities? at the same level as students in more advantaged communities? If these questions are of interest, then we need to decide

now on an appropriate comparison group. Against whom or what do we want to compare our performance?

c. Look to achieve an absolute standard on preset goals. At least half our students should be enrolled in college preparatory courses. Eighty percent of the K-2 teachers will be using specific techniques in teaching science.

To address questions such as these, we need to decide now on the standard of success we will use. Consider, what are reasonable, positive expectations, high enough so that they represent meaningful standards, but not so high that they are unattainable.

Record your decisions for each question in an initial assessment design. (See Worksheet 2). Just as in formulating evaluation questions, in deciding how to collect information, there is no single right answer. Some kinds of information are more credible than others to some audiences. The limits of available time, expertise, and resources represents another reality that must be reckoned with.

Balancing completing requirements. Concerns for validity, credibility and feasibility need to be balanced carefully. In general, using readily available data saves significant time that otherwise would have to be devoted to instrument design and data collection. The price, however, is often sensitivity to school goals and intentions. For example, almost all schools administer and have available the results of norm-referenced standardized tests in at least

Worksheet 2:
Criteria for Judging Evaluation Information

Indicator	*Evidence of Progress*	*Standard of Success*
CTBS Reading	*School percentile*	*Above the national norm*
CTBS Reading	*Standard score*	*The four year trend is upwards*
Pre-algebra exam	*Percent passing*	*Increasing percent passing in three year period*
Truancy rate	*Percent truant*	*Percent of truancies less than 1%*
Parent survey	*Percent rating reading*	*At least 70% parents "agree" reading program is doing a good job*
Dropout rate	*Percent left school and no request transcript program positive*	*Dropout rate trend for past three years is downward*
SAT	*Percent taking exam*	*At least 75% of senior class sits for SAT exam*
English achievements	*Percent receiving 600*	*Percent receiving 600 on English SAT increases over 3 years*
St. Att. Meas	*Percent scoring high*	*At least 70% of students score above 75th percentile in positive attitude toward school*
Grad. Survey	*Percent graduating from college*	*Percent graduates graduating from college increased over 3 years*

reading, language arts, and math. Yet, as mentioned earlier, serious, questions have been raised about whether these tests provide adequate information on significant learning outcomes. Some whole language advocates, for example, take issue with the piece-meal skill design they see embedded in these tests and do not believe the tests assess valued literacy and communication skills. What other evidence of progress might be used? Student writing performance, the number of books read, work portfolios, parent and/or teacher observation of growth in communication skill, parent and or parent satisfaction with progress in reading are among the many possibilities.

Questionnaires often are a relatively fast and cost effective way to ask people directly what you want to know. Questionnaires enable you to customize your information to fit specific school interests. But it takes take time and attention to design clear questions and summarize results as well as careful follow-up to assure adequate return rates. Interviews, by phone or in person, also have the common sense design appeal of questionnaires. With trained and persistent interviewers, you can be assured of adequate return rates and bypass possible respondent reading problems, but at a cost of significant interviewer time. Observations are a little more intimidating to design because they require you to get very specific about the types of actions or changes of interest. Observations also require significant amounts of observer time, training, and repeated observations to provide reliable

results. Furthermore, credibility concerns may require independent observers, those with no apparent self-interest in results, which adds significantly to the cost of using observations. Teacher-made or other school-developed tests suffer from concerns about their reliability and how well they assess program goals. For that reason, school and classroom developed tests usually require either expert development and/or expert assistance in the development and validation process. (See Worksheet 3)

Sample Worksheet 3:
Consolidated Evaluation Plan

Evaluation Questions:
1. In what areas are we in need of improvement?
2. How well are we implementing a process-based approach to writing?
3. Is student writing improving?
4. Do students feel positive about the writing program and their ability to write?

Questions Addressed	*Instruments*	*Information Requirements*	*Standards for Judging*
1	*CTBS, state assessment*	*Reading and Math Percentiles*	*Look for scores below 50th percentile or lower than last year*
	Competency results	*Percent passing reading, math*	*At least 80% passing reading, math; 60% writing*
2	*Principal observations*	*Students prewriting, working in partners, groups, revising, using rubrics to check writing*	*All teachers observed do at least two process based lessons a semester*
2, 3	*Student portfolios*	*Writing assignments with prewriting, revision, checklist attached*	*At least two per semester*
2, 3, 4	*Student survey*	*Questions about how many writing assignments, and how many opportunities to work with others, revise, plan, how they feel about writing, if they feel writing is improving*	*An increasing percentage of students answering positively to the survey questions*
2, 3	*Teacher self-reports*	*Is student writing getting better? What difficulties are we facing in implement a process approach?*	*Some teachers report writing better. Some teachers report that they feel comfortable with nearly all stages of the process.*
1, 4	*Parent survey*	*Rating reading, math programs judging how students feel about writing/demo writing behavior*	*At least 70% rate positive (agree/ strongly agree*

Step Three: Plan to Manage the Instrument Development and Data Collection Process

After deciding what kinds of information you will need for your evaluation and generally from whom to collect it, you will need to schedule whatever instrument development is required and to decide specifically from whom and when to collect your data.

Consolidate your evaluation interests. A first step is to consolidate your evaluation interests into a feasible number of evaluation tools. Look across the information sources you have designated for each of your evaluation questions and find the commonalities. You may find, for example, that while you have several pages of information sources by question, they boil down to a teacher questionnaire and a parent questionnaire, each addressing a variety of specific issues.

Create a management plan. You've created a basic blueprint for the instruments you plan to develop and or use. Now the task is to designate the times at which each information source/evaluation tool is to be used. Where tools need to be specially created, designate a planned timeline for development, review, and refinement. Where commercial or other instruments developed by others are to be used, be sure to leave yourself adequate time for ordering, shipping, and distributing. And when using available information, be sure you collect it at the right level to enable you to answer your key questions and/or interpret your results. For example, if you are interested not only in how

all students at your school progressed based on the results of a particular test but also in how particular subgroups of students progressed, you will find it helpful to get individual student-level data on test performance, and for each student to designate the relevant groups of which s/he is a part. To look at progress, furthermore, clearly you'll need to gather results from more than one point in time. A sample management plan appears in worksheet 4.

Sample Worksheet 4:
Data Collection Management Plan

What	Person Responsible	Sampling Plan	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CTBS	School secretary	All students in grades 3-6										15-20		
State assessment	Principal	Grade 4, 6										22--2		
Observations	Principal	Grades 3,5			x	x	x			x	x	x		
	Asst. Principal	Grades 4, 6			x	x	x			x	x	x		
Student survey	Principal-develop advisory committee--approve teachers--administer	Grades 3-6 15 per class to represent ESL, GATE, special ed. chapter 1, regular		x	x	x								x
Student Portfolios	Teachers	All students K-6				x				x		x		x
Teacher self-reports	Teachers	Grades K-6 at faculty meetings	x	x		x				x	x	x		x
Competency Results	Teachers	All students, grade 4											x	

Considerations in scheduling. Scheduling your evaluation design and data collection efforts requires a balance of a number of sometimes competing factors. As you get your schedule, you'll need to consider the due date for a required report.

- when specific information is available;
- a reasonable time within the school year to collect the information;
- how much time is reasonably required to design, try-out and implement data collection plans; and
- how much time is required for data analyses and reporting.

For example, suppose you have to report to your school board by the end of the fiscal year in June. You plan to use teacher and student questionnaires to teachers and students. You may want to give yourself at least a month to summarize and discuss the meaning of your results, and you need at least three weeks to send out and collect completed questionnaires and to follow up on missing respondents. You also want to collect the information as late as possible in the school year--to give the new program strategy maximum time "to take", but you don't want to run into the May required testing crunch. You decide therefore that late April is a good time for data collection. Working backward from that designated date, you designate time for the development of the draft questionnaires, time for review, time for revision, time for duplication, and time for

development of administrator directions and find that you must begin your first task in October. If you're planning interviews or observations, you'll also want to allow sufficient time to develop the instrument and train your data collectors. If you're relying on information collected or summarized by others, of course, you're dependent on their schedules which often don't match yours. In these cases, you just have to do the best you can, which sometimes means delaying a desired report, submitting a draft which is missing a section, or using available data from a prior year(s).

Deciding whether to sample. At this point, too, you need to decide from whom or about whom you will collect information--whether you want to sample subjects or respondents or to collect information from or about your entire population. Should you mail a questionnaire to all parents, or a sample of parents? To all students or only a sample of students? Although it may at first appear that more is better, decisions often come down to a matter of available resources and necessary trade-offs between breadth and depth. In any case, if the number of potential respondents is fewer than 20, it makes little sense to sample. As your numbers grow larger and the costs of data collection, scoring, and/or analysis become more intensive, sampling may be a necessity.

Be sure to think about the numbers of respondents you'll be dealing with as you design any new instruments. For

example, if you expect to get responses back from 200 parents, you'll want to be sure responses are easy to score and summarize. You may find that when numbers are large, you'll want to use a majority of selectec response questions, questions where respondents answer on some scale of "agree to disagree," or are asked to choose among given alternatives. Scanning also is a possibility to investigate when using selected response questionnaires. You'll also want to include some open-ended questions so that you get a better sense of what people a feeling and why. The appendix for Step Three has examples of questionnaire items addressing school quality issues.

Step Four: Collect and Analyse Data

A systematic data collection process. Organization and preplanning of the data collection process are essential if the information you need to answer your evaluation questions is to be useful. Because information collected at the school level, from students, teachers, parents and administrators in many cases involves people who are not highly motivated to do a careful job of answering survey questions or who may have to carve time out of a busy schedule to respond to your questionnaires or interview questions, you will need to have clear directions and a convincing statement of the need for and importance of the information.

In step 3, you formulated a plan for collecting information which included what instruments or techniques were to be used and when. As the time approaches for actual data collection, you will need to review your schedule and begin preparation necessary for data collection. Worksheet 5 presents typical timelines for the major categories of data. If this is your first experience in planning a comprehensive evaluation, these timelines may help you to prepare a more realistic schedule.

Identifying appropriate scores or units for analysis. While you are managing the nuts and bolts of administering and securing the return of your instruments, you also should be thinking about how you will make sense of the information once you receive it. Data analysis and

Sample Worksheet 5:
Data Collection Timelines for Commonly Used Indicators

Time	Standardized Test	Questionnaires	Interviews/Observations	Archival
6 months prior	Take inventory, order needed booklets and answer sheets	Develop survey questions try out with sample	Meet with advisory committee to generate questions/categories	Locate records; find missing try
3 months prior	Preslug student answer sheets with ID, grade, special information such If you send our answer sheets out contact publisher for help in coding evaluation information so that you can get reports for various groups	If you have a survey from the past, update with help Try out survey with 3-5 people and clear up ambiguous questions. Translate surveys and try out with 3-5 bilingual speakers	If you have model interview/obs. update with help from advisory	Be sure that current data are being filed, e.g., grade reports, attendance
1 month prior	Meet with teachers giving test and agree on uniform test preparation guidelines such as teaching students about pacing, practice on different item formats, explaining what will be tested	Write letter of introduction to survey or directions for administration. Include purpose, how results used, why participation important, need for honesty, how to return survey, due date	Practice using interview/observation instruments. Select people who agree on meanings and ratings ot collect interviews/observations	Meet with advisory committee to set up categories "scores" for data.
2 weeks prior	Prepare directions for test administration, organization of answer sheets, due date. How long each test takes, proctoring rules. Pack tests and answer sheets and distribute to teachers.	Print letters, surveys, stuff and label home mailers. Prepare class sets for distribution to teachers.	Run reliability study for observers and for people coding interview data. Make adjustments in instruments as Print observation/interview questions.	Use practice data to practice accurate coding.
1 week prior	Meet with faculty to review administration and return procedures	Mail surveys	Remind teachers/staff of observation and interview appointments	Hand out code sheets and instructions
Day data received	Organize answer sheets for scoring. Check accuracy of hand-coded data.	Check for missing data and follow up to get back	Check to see that all returned.	

interpretation are based on well organized and clearly summarized data, typically described with one or more types of scores derived from the tests, surveys, records, or observations, you collect. These scores as then used to find patterns, examine trends, look for relationships and draw generalizations to answer your evaluation questions.

Your first task in data analysis, then, is to decide how to "score" your data or what "score"(s) to record. Your choice of score often will depend on the type of instrument you intend to summarize.

- raw scores--the direct numerical representation of an individual's response on a test--the number correct on a science test, the number of steps successfully completed on a performance test; or the direct (or sometimes adjusted) numerical representation of a rating or survey response. Raw scores in this sense can be derived from most sources of data.

  Raw scores can be subjected to all numerical calculations and often are the score of choice for calculating means (the arithmetical average).

  Raw scores sometimes need to be adjusted to maintain consistency of meaning across scores. For example, the responses to a negatively

worded attitude item needs to be numerically reversed if they are to be combined with or compared to positively-stated items. If you have a parent survey where a rating of 5 means "outstanding" and a "3" means neither good/bad and a "1" means don't know, the direct raw score conversion is not interpretable. In calculating an average in this case, you'd probably want to hold aside the "1" ratings from your analysis (so that your analysis is of people who, in fact, have an opinion). An even better strategy would be to look at the distribution or percentage of respondents giving each rating.

Sometimes you can create your own raw score equivalents for nominal (non-numerical) data. For example, grade point averages are computed by converting an "A" to a score of "4," an B+ to "3.5" etc. You can then use these scores arithmetically--but only when the nominal data itself represents a continuous scale. If it's not continuous, e.g., responses to the question, "What's your favorite score," then you summarize your scores in terms of the percentage of individuals giving each response.

Raw scores sometimes are grouped into score intervals or even categories for ease of data summary and subsequent analysis. For example, instead of scoring the exact number of days absent for each student, you might come up with meaningful interval categories, low absence rate 0-5, (average absence rate) days, 6-10 days (high absence rate), 11-15 days, serious problem, more than 16, you can then tally the number of students falling into each absence category.

- Percent correct scores (not to be confused with percentile scores). Percentage scores are computed from raw scores. They communicate what part of the total score an individual has achieved. They may also be used to indicate what proportion of your respondents gave a particular response in a particular category.

  Like raw scores, percentage scores can be subjected to all numerical calculations.

  Percent correct scores are particularly appropriate for reporting the results of criterion-referenced tests, such as competency

tests and mastery tests. They also are useful for making criterion-referenced interpretations of subscale performance on norm-referenced tests. For example, what percentage of the inference items did the students answer correctly?

Percentage correct scores can help you compare results across assessments of varying length, but the varying difficulty levels of different tests remains a serious problem. A high percentage correct on a difficult test means something different than the same score on an easy test and percent correct scores tell us nothing about test difficulty.

Percentage scores can help you compare across different indictors. When percentages are used as a comparison they provide a clearer meaning than the raw score alone. For example, looking at absence rates (the number of days absent/total days enrolled at school) rather than number of days absence can help you control for enrollment differences or semester length differences.

- Other derived scores. Although rarely computed by school-based educators, derived scores are almost

always available for commercial tests. Derived scores are useful because they have statistical properties that provide useful interpretations of data. The most commonly used derived scores include:

Percentile scores - a score indicating where a student's (or school's) score falls compared with a national norm group. Be aware, however, that you cannot average percentile scores; the appropriate "average" statistic for percentiles is the median--the score point which divides the top half of students in terms of performance from the bottom half. The median is the score point at or below which 50% of your students perform.

Grade equivalent scores--a score indicating where a student's (or school's) performance falls compared the average performance of students at a grade level. Like percentile scores, most grade equivalent scores cannot be "averaged." Be aware also that grade equivalents don't describe grade level placement; rather they tell you (like percentiles) how far above, or below average

your students are performing on the level of the test given.

Normal curve equivalent, standard scores, scale scores--these derived scores are based on raw scores and their distributional qualities. These scores can be used for arithmetic computations, graphs, and federal project reporting.

Total score or subscale score? In addition to what types of scores to use in data analysis, you are faced with choices in the level of detail. Most standardized tests report total scores for students in each area assessed, typically reading, math, and language arts. Within these areas, subtest scores for specific strands or skills are also provided. The total score gives you a general picture of performance and has the advantage of being technically more reliable than subtest scores. Subtest or subscale scores, however, provide more diagnostic detail on student performance to help analyze sources of strength and weaknesses.

A similar score decision often exists with survey data. You may have asked parents a series of questions about their satisfaction with different aspects of the school. You can treat each item in the parent survey as a score to get a handle on how parents feel about specific issues, or you may

want to get a general feel for their overall satisfaction by combining the scores of items measuring a particular program. Worksheet 6 presents examples of appropriate score selection for different purposes.

A variety of approaches to data analysis. Once you've collected the information and made decisions on the appropriate scores, formal data analysis begins. Your techniques will vary depending on whether your data are quantitative (numbers, selected response items, things which can be counted) or qualitative (open responses about respondents' perspectives, opinions, narratives). For quantitative data:

1. Consider summarizing information in terms of mean scores, e.g., how the average student performed; how satisfied (on a five point scale) the average parent felt; the teacher experience of the average teacher. In summarizing the results of norm-referenced tests, the mean derived score or percent correct score can be useful.

2. Consider summarizing information in terms of the proportions or percentages of respondents responding in particular ways, e.g., the percentage of students who score at each quartile, are absent more than 20 days, who regularly complete an hour of homework each day, who are enrolled in college preparatory classes, the proportion of parents who expect their children to

Sample Worksheet 6:
Data Summarization Guidelines

Question: In what areas are we in need of improvement?

Instrument	*Score Used*	*Summarization Method*
CTBS	*Percentiles*	*Table showing percent of students coring in each quartile range: 0-24; 25-49; 50-74; 75-99*
	Percentile	*School level percentile rank equivalent to the mean school standard score*
	Derived score	*Bar graph showing mean standard scores for reading, math, and language for grades 3,4,5,6 (separate graphs for each grade level)*
	Derived score	*Line graph for reading showing mean score for last 3 years; graphs for math and language*
State Assessment	*Percentile*	*Table showing percent of students scoring in each quartile range*
	Percentile	*School rank in state*
	Derived score	*Mean scores in reading for LEP, English, FEP students; for math; for language*
	Derived score	*Line graph showing mean reading score for past 3 years; mean math; mean language*
Competency	*Percent*	*Bar graph showing passing percent reading, writing, math* *Bar graph showing passing percent for special program students*
Parent survey	*Average percent positive on program-related questions*	*Bar graph comparing average percent "agreeing" with positive statements about reading, math, language*

Question: How well are we implementing a process-based approach to writing?

Instrument	*Score Used*	*Summarization Method*
Observations	*Tally of techniques observed*	*Table listing desirable writing strategies observed and frequency of each*
Teachers	*None*	*List of successes and obstacles reported*

Question: Is student writing improving?

Instrument	*Score Used*	*Summarization Method*
Portfolios	*Essay rating*	*Bar graph showing percent of students at each grade level rated "4" or above*
Student survey	*Percent saying "agree" or "strongly agree" on questions 2,6*	*Bar graph showing average percent reporting writing is improving by grade level*
Teachers	*None*	*List of specific ways teachers report writing improved. Teacher estimate of percent of students still writing well below expectations*

Question: Do students feel positive about the writing program?

Instrument	*Score Used*	*Summarization Method*
Student survey	*Percent saying "agree" on questions 9 & 11*	*Bar graph comparing average percent students with positive responses on questions 9 & 11 with average percent of parents reporting students are positive on parent questions 5, 8*
Parent survey	*Percent saying "agree" on questions 5 & 8*	

attend college; the proportion of teachers and parents who are highly satisfied with * ir students' progress; the proportion of students who report positive attitudes.

3. Consider summarizing information in terms of the proportions of students or respondents meeting pre-specified standards of success that you documented in Step 3. In determining these standards, to repeat, you need to consider what represents a positive showing. For example, urban schools often consider "scoring at grade level" a meaningful standard of success. Schools serving highly advantaged students may see success as having a larger proportion of students scoring in the upper quartile. More technically sophisticated schools may even set standards of success in terms of decreasing the proportion of students scoring in the lowest quartile(s) by a given amount and increasing those scoring in the highest.

You can similarly set standards or cut-off points t help interpret questionnaire responses. S ppose the issue is "are parents satisfied with their children's educational program?" A locally developed questionnaire asks parents to rate their satisfaction with a variety of aspects of the program using a five-point scale. Knowing that "social desirability" in typically inflates responses, we can consider responses of "4" or "5" as positive, and those of "1" or "2" as negative.

Summarizing information in terms of the proportions of respondents who meet our standards of success, or our standards for regarding a result as positive, brings with it an advantage for looking across results from different measures. Although not a methodologically rigorous approach, we can compare proportions across results and see where we have the most success and where we have the least. Based on our cut-off points, we may determine that 80% of the parents have a positive view of the school's educational program, but only 20% of the students meet our criteria of success in writing. We would conclude that parent satisfaction is a relative strength while student writing performance is a relative weakness.

4. Consider summarizing qualitative data in categorical or thematic form.

For qualitative data, the summary process is more intellectually grueling. Specific analysis procedures are beyond the scope of this document, but essentially the task is to 1) examine responses, 2) look for common themes or common categories of responses, and 3) tabulate the frequency of each category or theme. For example, as you read through parent responses to a question such as "What is the principal strength of the program at our school?", you may find responses fall into categories such as curriculum (and within that, specific curricular areas such as reading, math, social

studies), quality of teachers, quality of administration, opportunities for parent involvement, extra-curricular opportunities, and counseling. After developing this initial category system, you'd go back through the responses and tally the distribution of responses which fell into each of these categories. As you did so, you'd also want to note anecdotes and examples which best typify categories (or themes which recur most often and/or are deemed most important for other reasons).

5. Consider looking at relationships between scores. During the summarization process, you will begin to notice relationships between different data sources. As you calculate absentee patterns by grade level, sex, and educational placement, you will probably note areas where relationship exist between one or more of these variables. These relationships may help you pinpoint areas or your program in need of improvement or provide explanations for some of your outcomes. Some of the most common relationships between context and process aspects of schooling and outcomes include the following:

- Socioeconomic status, length of time in the school, language proficiency, and standardized test scores
- Attendance and grade point average
- Enrollment in academic courses and SAT, ACT, or Achievement Test scores
- Parent involvement rates and parent knowledge about school programs and student achievement

- Student attitudes toward school and attendance, grades, future plans
- Recent teacher inservice including opportunities to use new techniques and implementation of new techniques

The relationship between context or process data and outcome data provides partial explanations for school effectiveness. These explanations will form an important part of your evaluation findings as well as suggest further areas for inquiry. As you encounter what may appear to be related trends in the information you summarize, make a note of the relationships to examine and interpret in a more formal manner during step 5.

As summary of the some of the points we've made about score selection and analysis approaches Table 2 presents guidelines for summarizing data resulting from the measurement instruments which are most common in schools.

Present findings. One part of the data organization and summarization process is deciding upon the manner in which data are to be analyzed. The second step in this process is to select a format for presenting the summarized information. Two major strategies exist for presenting summarized data: tables and graphs. Each has its advantages and sometimes it will be necessary to use both methods in order to get a complete picture of your results.

Tables. The first step in data analysis for most evaluators is to organize results in tabular form. Most data are summarized in <u>frequency tables</u> which simply present the

number or percentage of subjects falling into different score ranges or response categories. Tables can also be used to present observation or interview data, with categories listed in the left-hand portion of the table and the frequency of observations or items mentioned to the right of the category. Nearly all information that can be "counted" can be summarized in tabular form.

Graphs. There are two general categories of graphs, line and bar. Line graphs (technically called "frequency polygons") are useful for plotting trends across time. Remember that line graphs don't make sense when the connected points really have no relationship to each other. For example, you could plot your school's reading scores or the percent of parents rating the reading program as adequate for the past three years with a line graph. However, it would not make sense to use a line to connect this year's average reading, math and language scores or to connect the percentage of parents liking the reading, math and language programs. A line linking these three dissimilar points would provide a profile of scores and show you which are your strengths and which are relatively lower, but you should be caref ot to infer relationships among the linked scores in the same way that you would if you were looking at one score over time.

Bar graphs (technically called "histograms") are useful in comparing different scores or presenting responses from questionnaires. The "y" axis is usually used to show the

percentage of responses to a questionnaire item or the mean test score. Bars are located in the "x" axis to represent different survey items, groups responding to the same item, or different subtests.

Survey summaries. Perhaps the easiest way to summarize a questionnaire is to copy the frequency and percent of responses to each response choice for each item of the survey on a clean form of the survey. The next step would be to mark items measuring similar factors and calculate average percentages of responses on each response choice for the grouped items. This summarization could then be presented in tabular form and graphed as well.

Appendix Four provides some date analysis strategies for typical school evaluations. Examples of data presentation techniques appear in the Appendix.

Step Five: Interpret and Communicate Findings

The data you have so carefully organized, graphed, and summarized with statistics cannot fully capture the complexity of school quality nor the reasons why particular results occur. Data summaries and sophisticated analyses *cannot* direct an agenda for action.

Data *can* raise issues for consideration among knowledgeable stakeholders. Data *can supplement*, but not supplant, our working knowledge to increase the probability that our decisions will have the desired results. Data *can* stimulate thoughtful discussion about the nature of the challenges faced by a school and the progress it is making toward meeting those challenges.

Interpretation and communication of findings is not primarily a technical task but part of the decision-making, problem-solving, management process of a school. Discussion of systematically gathered and summarized information, furthermore, is a management technique for building consensus about school goals and success. It is part of a continuing, interactive, problem solving process which to be used most effectively will engage a variety of stakeholder groups.

Interpreting results. Plan to involve key constituencies, as your transverse step 5, interpretation and communication of findings. These constituencies will help you generate the meanings and implications of the data you have collected. When interpreting data summaries you may wish to work with a small steering committee of staff or

parents who are "close" to the data and can provide insights about results or find unexpected trends in the information.

When you work with this group, you will need to establish a focus for reviewing the information you wish to interpret. Perhaps the clearest focus is your original one, the set of questions you generated to answer the "how are we doing" question about your school. In the ensuing discussion, however, the group should consider related questions that will provide explanations and suggested courses of action.

Provide each member of your steering committee with copies of tables, graphs, or survey summaries. Then, begin asking each of your questions while members review data and suggest answers. Have a member of the committee summarize the group answers. As you review the information, resolve discrepancies in interpretations, make a note of information that is incomplete or where you would like more information, and generate possible explanations suggested by the data or your steering committee. The goal of data interpretation is to determine what courses of action would most likely help you meet your school goals. What changes in activities should be made? What kinds of staff inservice are needed? What additional resources are needed? Should parent or community involvement be widened?

Although the evaluation questions for your school will be more specific than the ones we have used in this guide, the strategies for reviewing and interpreting data to

answering certain kinds of questions is the same. Table 2 provides a set of questions that includes those most commonly asked in school level evaluations. For each question, we have provided some strategies for reviewing and interpreting data.

Certainly the answers to your questions will not be found in tables of average test scores, graphs of responses, or notes from classroom observations. But hypotheses or suggestions derived from these data can initiate discussion among the "experts" you have selected to help you review the data. The discussions will validate some findings and provide explanations for others. Your expert group can also help to uncover areas where findings are invalid. Consider the case of the unexpected and rather precipitous score drop on the state writing assessment. When reviewing the findings with a small group which included the English department chair, the district testing director, the curriculum and bilingual program directors and several of the previous years test-takers, it became quickly apparent that several students in advanced classes did not participate wholeheartedly in the assessment and offered what can be charitably called "facetious" essays. While student motivation did not completely explain the drop in scores, it did provide an explanation that teachers or the district "experts" would have been unable to confirm.

It is important to develop interpretations and explanations prior to reporting findings. Most often the

reporting process is interactive involving the school administrator and a supervisor, the school board, the faculty, the PTA, the parent advisory committee, or more and more often today,the media. While all of these groups are interested in your answer to the "how are we doing" questions, you can bet that someone in each of these reporting settings will ask: Why are you performing at this level and what are your plans for improvement?

Communicating Findings. Communicating your findings can take many different forms. Certainly formal, written reports will be part of the evaluation process. However, the most useful reports will be targeted to specific audiences and their concerns. Research conducted at CRESST on the use of evaluation information for school-based decisions provides some general guidelines for written reports directed to site level administrators and school boards. These guidelines are summarized in Table 2.

Table 2

Hints for Creating Useful Reports

Both school principals and school board members say that a useful report:

- is brief,
- contains narrative or explanatory information,
- presents trends over time in graphical form to support conclusions, and
- has a technical appendix for those interested in more detail.

There are some differences in report contend found useful by the two groups.

- School level administrators are most interested in the **"why"** and **"how"** of student outcomes. They seek information clarifying relationships between school policies, curriculum and instruction and school outcomes.
- At the board level, not unexpectedly, the central concern is with the **status** of school performance and a description of progress rather than the nuts and bolts of planned improvements or reasons for performance.
- When sharing information with school boards, there is a danger in presenting information at a level of detail and complexity that is unneeded.

Both audiences use and value qualitative information in decision-making.

- Written reports that include summaries of carefully conducted observations, interviews or attitude surveys will provide powerful information for program improvement.
- Teachers, principals and others form conclusions about school effectiveness and hypotheses about how programs succeed or fail based on impressions and experiences.
- A few well selected anecdotes also can be a powerful device for communicating the meaning of your findings.
- Explanations of school results generated during the data interpretation process form yet another source of useful information for school level decisions.
- Qualitative data form an important part of the decision-making process; summaries of these data belong in written reports.

Because the data collected and interpreted to answer "how are we doing" questions are gathered throughout the year, the reporting process may be viewed as an ongoing activity. While formal, written reports for audiences outside of the school may be prepared at the end of the year or await the interpretation of all data, school level stakeholders will find information most useful and will be more willing to cooperate in data collection activities if feedback is fairly immediate. For example, the results of student attitude surveys or the comparisons of responses to similar questions by teachers, students and parents are of interest to the respondents. If reported promptly, the surveys may help initiate needed changes that will result in a "mid course correction." For example, one intermediate school in the Los Angeles area concerned with relations among different ethnic groups asked students, parents, and teachers to respond to the question: "Students respect others with different backgrounds." Over 90% of the parents and teachers responded "agree" or "strongly agree" to this question. Only 60% of the students, on the other hand, answered similarly. Sharing results with the student council provided teachers and administrators with another view of the "harmony" observed on campus. The school then sets up special homeroom activities to provide opportunities for students to get to know others socially during the same school year.

Both written and oral presentations will not necessarily report all aspects of the evaluation. Each audience has a

different set of concerns and a different level of sophistication when it comes to interpreting data. Parent audiences want to know how their own children are doing or how the school "stacks up." Teachers want to know if any curriculum or instructional changes are "paying off." Local press and the community want to know that their school is doing well or improving, especially in important areas such as reading, writing and mathematics.

The mailing of standardized test scores to parents presents a unique opportunity both for helping parents to understand tests and for involving parents in their child's education. Parents are generally concerned about ways to help their children. Group meetings can be held to explain the testing procedure to parents, interpret the percentile and other scores mailed home, and allow parents to see samples of test items or review the child's answer sheet. Very often, these meetings provide a good forum for discussing the kinds of things parents can do at home to help their children, to distribute summer reading lists or practice materials, and to help parents understand curriculum changes implemented during the previous school year. While parents may not always be interested in attending an evening meeting to discuss new techniques used in the reading or mathematics program, they are usually extremely interested in their child's test scores which can serve as an entree for discussing the larger issues of their child's education.

Another important reporting forum is during regularly planned advisory committee meetings, be they for bilingual, special education, gifted, or school level planning. Advisory committees can use the information gathered during the evaluation for developing the school plan. The data presented at advisory meetings, which generally have a long agenda and very little time, should be focused on answering just the few questions the committee must discuss, generally, how are the students (or special populations) doing and what areas need improvement?

Teachers and other school staff form the closest and most important audience for reporting results. Most of them have been involved in one or more aspects of the school improvement effort and have participated in data collection. This audience wants to know not only how students are doing, but how they are doing in terms of the school goals. They want to know what specific strategies will improve their programs and how they can manage better with the limited time available both for planning and instruction. This group wants explanations and solutions. The qualitative data you have gathered, the steering committees interpretations and recommendations will spark a discussion with faculty and staff that can lead not only to program changes but will also clarify and explain findings. Staff has little time. Reports would most probably be useful if they are focused on specific areas, one time reading, another time the after school program, another time "hands on science," and followed

up by some opportunity for staff to add interpretations and recommendations to those presented at their meeting.

Portions of your evaluation findings, from how well students are doing when compared with other schools to what aspects of the program appear to need improvement can be reported in your regular PTA newsletters, annual reports to the community, or at regularly scheduled parent events such as Open House. While these reports need not be limited to "good news", remember that the community is unsophisticated about how schools operate. Each presentation should provide a context for the information and some concrete examples that explain the results and the courses of action to be taken.

As a result of state legislation for "school of choice" because of special funding, some schools must issue special "school accountability report cards" or annual reports. Often the information schools report is mandated by state law. However many schools are finding that these "report cards" are an efficient way to address the concerns of their many publics. The report cards also provide school staff with a snapshot of the school and its programs that enables them to get a better picture of the school's image. We have included an example of one of these report cards in the appendix for those interested in using the school profile as a method for reporting evaluation information.

Finally, some of your results will be reported by the newspaper. Most often, this occurs because the state or district has released test scores, not because you have

called a press conference. News people need help in understanding what scores mean. They also need a clear explanation of why students are performing at certain levels and what the school is doing to improve or maintain performance. Specific examples of test items, program activities, or student work are often useful in helping the media to understand what school performance is about.

Step 6. Act on Findings and Continue to Monitor the Program

The process of evaluation presents a rational, systematic method of informing decisions. We evaluate because we believe that information derived from a variety of sources will help us to develop more specific action plans and to pinpoint areas for school improvement. A formal process, such as the one proposed in this guide, simply externalizes the criteria by which we are judging our schools. As mentioned in the beginning of this guide, evaluation is not a linear process and it certainly has no discernible beginning or end. While the beginning would appear to be the generation of questions and the development of a focus for the evaluation, in fact, this focus and some of the questions sprang from "data" already known to the school staff, previous years' scores, student behavior, the condition of the buildings, state curriculum changes, and so on. And certainly, the reporting process is not the end of the cycle. As you share your findings from one data gathering effort, questions for the next cycle emerge. Teachers, parents, the press, the school board, colleagues, ask questions that you cannot answer with the information at hand. When your staff deems these questions important to address, they become the basis of the next evaluation cycle.

As school practitioners, we process a lot of data routinely, average daily attendance reports, vandalism and crime statistics, enrollment projections, grades assigned by

teacher or course, test scores, teacher credential and education profiles and the like. Conducting an evaluation makes us more conscious of these data and helps us to use what is already available in an efficient manner. The schools are bombarded with more information than can be digested. A planned evaluation, allows us to organize our information and helps us to focus on data in an orderly manner. It tells us what we can pay attention to and what we can give ourselves permission to ignore, at least for the present.

Because of its recursive nature and its dependence upon multiple data sources, evaluation as an enterprise can lead quite naturally into the development of a data base for school based management and decision-making. Many elementary and most secondary schools have access to computers that can store descriptive information about students and staff and link these data to performance, opinion, attitude, or other core outcomes. Analyses of this database can be used to inform student, class, school and district level decisions. Although the development of such a system is beyond the scope of this guide, we have included in the appendix some examples of comprehensive information systems and sample reports which might be derived from them.

Appendices

Step One Appendices:

Typical Evaluation Questions

Typical Evaluation Questions

Student Outcome Questions:

- How are student performing on standardized tests of reading/mathematics writing/language/ relative to comparable schools? The state? The nation? Mainstream student populations?
- In which subjects are student scores highest? Lowest?
- After adjusting for changes in test norms or student population, in which subjects have we improved over the last 3 years? Maintained our relative ranking? Declined?
- How are student attitudes toward reading,writing,science, math? Do attitudes differ by sex? subgroups? grade levels?
- What are our students' post high school plans when they enter high school and how does this compare with actual post school placement?
- What is our school completion rate? How does it compare with comparable schools? with the state/nation? with our parents' goals?
- What is our attendance rate? Does it differ for certain subgroups of student?
- In examining performance patterns for the major subpopulations in our school by SES, ethnicity, language proficiency, or sex, do we we differences in grade

averages? patterns of courses taken? test scores? school completion? post high school plans?

Curriculum Questions:

- Do we have enough required texts or adopted materials for each student?
- Is our curriculum aligned with state frameworks or linked to a comprehensive framework of some sort (e.g., Curriculum Standards issued by professional organizations?)
- Are course offerings consonant with student post high school plans?
- Are course requirements or instructional minutes in line with state guidelines or schools with goals similar to ours?
- Have we agreement among teachers of the same grades or courses what ought to be "covered" so that students at the same grade level or in the same course are receiving essentially the same curriculum?
- Do we have a clear statement of curriculum goals for reading? Writing? Mathematics? Science? Social studies? Taking into account the balance between process emphases and concept acquisition? Between propositional knowledge and procedural knowledge?

Instruction Questions:

- In what ways does our classroom instruction from what we consider desirable or optimal?

- What kinds of grouping policies to we use for placement and instruction?
- Are we aware of current instructional practice in math, reading, science, social studies and have we looked at ways of updating our instructional strategies?
- In what ways does the teacher's role in instruction differ by grade level or subject? Do we wish to examine the relationships between teacher roles and student attitudes or outcomes?
- Are classrooms organized in ways that provide equal access to the core curriculum for all students including special education and limited English proficient students?
- In what ways is technology used to support instruction and student learning?

School Climate Questions:

- Are school goals clear to students, parents, teachers?
- Do we have a written set of student expectancies for coursework? For discipline?
- Is there mutual respect and a positive working relationship among students? Between students and teachers? Between teachers and parents? Between teachers and the administration? Between parents and the administration?
- Do parents feel the school is doing a good job? Do they feel welcome and comfortable at school?

- Do students take pride in their school? Do teachers feel supported by administration? Is there support for change or innovation when a need for such exists? Do students and teachers feel safe at school? Is faculty morale high?

Staffing Questions:

- Is there a regular system of teacher evaluation in place that teachers feel supports their professional growth?
- Are teachers assigned in their major or minor? Do teachers of special populations (e.g. special education, bilingual) have the appropriate credentials or training?
- Is there a comprehensive inservice program provided to meet teacher needs and interests?
- Are student-staff ratios in line with state guidelines?
- Is the staff perceived by students and parents as being well prepared and attended to student needs?

Parent Involvement:

- Do parents feel comfortable visiting the school? contacting teachers or administrators?
- Is there a mechanism for communicating with the parents who speak no English?
- Are parents included in any aspects of school planning or evaluation?
- Do parents attend school events? Is there a difference in attendance for certain subgroups of parents?
- Are there volunteer opportunities for parents?

- Does the school have an outreach to the community or business partnership program.
- Has the school explored ways of establishing financial support groups for special needs (e.g. art, music, sports).

Step Two Appendices:

Malaga Cove
Intermediate School
Student Survey

Ridgecrest
Intermediate School
Parent Survey

Ridgecrest
Intermediate School
Teacher Survey

MALAGA COVE INTERMEDIATE SCHOOL
STUDENT SURVEY

Mark the letter of your answer(s) on your Scantron form with a #2 pencil.

1. Grade you are in this year.
   a. 6th
   b. 7th
   c. 8th

2. Are you in any of the following? (Mark all that apply.)
   a. GATE
   b. ESL
   c. RSP
   d. SDC

3. I am informed of events and happenings at Malaga Cove.
   a. always
   b. usually
   c. sometimes
   d. never

4. Teachers let me know what is expected in my classes.
   a. always
   b. often
   c. sometimes
   d. never

5. Discipline is maintained at my school.
   a. always
   b. often
   c. sometimes
   d. never

6. I like being at Malaga Cove.
   a. always
   b. often
   c. sometimes
   d. never

7. I feel my teachers are interested in me.
   a. always
   b. often
   c. sometimes
   d. never

8. Teachers treat students with respect at Malaga Cove.
   a. always
   b. usually
   c. sometimes
   d. very seldom to never

9. I feel safe at Malaga Cove.
   a. always
   b. often
   c. sometimes
   d. never

10. During school hours, students treat school property with respect.
    a. always
    b. usually
    c. sometimes
    d. very seldom to never

11. I am satisfied with my progress in school.
    a. always
    b. often
    c. sometimes
    d. never

12. Opportunities exist for all students, regardless of ability, to take challenging courses and move at an appropriate pace.
    a. always
    b. often
    c. sometimes
    d. never

13. Students at Malaga Cove accept each other without racial or ethnic prejudice.
    a. always
    b. usually
    c. sometimes
    d. never

14. Students treat each other with respect at Malaga Cove.
    a. always
    b. usually
    c. sometimes
    d. very seldom to never

15. The school buildings are clean and attractive.
    a. always
    b. usually
    c. sometimes
    d. never

16. The school grounds are clean and attractive.
    a. always
    b. usually
    c. sometimes
    d. never

17. When you need to talk to an administrator or counselor, can you do so with relative ease?
    a. always
    b. usually
    c. sometimes
    d. never

18. When I have concerns, the administrators are willing to listen to me.
    a. always
    b. usually
    c. sometimes
    d. never

19. When I have concerns, the counselors are willing to listen to me.
    a. always
    b. usually
    c. sometimes
    d. never

20. How satisfied are you with the help provided by counselors in solving students' personal problems?
    a. very satisfied
    b. satisfied
    c. neither satisfied nor dissatisfied
    d. dissatisfied

21. How many of your teachers are willing to give help outside of class time?
    a. all
    b. most
    c. about half
    d. few
    e. none

22. How many of your teachers encourage you in your school work?
    a. all
    b. most
    c. about half
    d. few
    e. none

23. My teachers expect high quality work, including homework.
    a. always
    b. usually
    c. sometimes
    d. never

24. My teachers are interested in and enthusiastic about their subjects and able to inspire students.
    a. always
    b. usually
    c. sometimes
    d. never

25. How satisfied are you with the variety and quality of student activities that your school offers such as assemblies, dances, intramurals, etc.
    a. very satisfied
    b. satisfied
    c. too many activities
    d too few activities

26. In general, how satisfied are you with Malaga Cove?
    a. very satisfied
    b. satisfied
    c. I have no feelings either way
    d. dissatisfied

27. How would you rate "school spirit" at Malaga Cove?
    a. excellent
    b. good
    c. adequate
    d. poor
    e. don't know

28. How many of your teachers seem to care if you learn the subject they teach?
    a. all
    b. most
    c. about half
    d. a few to none

29. Regardless of what your grades may be, in how many of your school subjects would you say that you are "learning a lot," this year?
    a. in all of my subjects
    b. in most of my subjects
    c. in about half of my subjects
    d. in very few to none of my subjects

30. How often do your teachers clearly explain what to do on assignments?
    a. always
    b. usually
    c. about half the time
    d. seldom to never

31. My homework assignments are reviewed and returned within one week.
    a. always
    b. usually
    c. sometimes
    d. rarely to never

32. I have opportunities to write in almost all of my courses.
    a. all
    b. most
    c. about half
    d. few
    e. none

33. Do you have at least one close friend at school?
    a. always
    b. usually
    c. seldom
    d. never

34. Do you feel comfortable in asking questions of your teacher in class at the appropriate time?
    a. always
    b. usually
    c. seldom
    d. never

35. Do you do your homework on time as assigned?
    a. always
    b. sometimes
    c. seldom
    d. never

RIDGECREST INTERMEDIATE SCHOOL
PARENT SURVEY

Mark the letter of your answer(s) on the enclosed Scantron form with a **#2** (soft lead) pencil.

1. Grade your student(s) in this year. Mark all that apply.
   a. 6th
   b. 7th
   c. 8th

2. Is your student in any of the following programs? Mark all that apply.
   a. GATE
   b. ESL
   c. RSP
   d. SDC

3. The school and teachers let me know what is expected of my student.
   a. always
   b. often
   c. sometimes
   d. never

4. Discipline is maintained at Ridgecrest.
   a. always
   b. often
   c. sometimes
   d. never

5. I feel welcome at Ridgecrest.
   a. always
   b. often
   c. sometimes
   d. never
   e. doesn't apply

6. My student's needs are met by the teachers.
   a. always
   b. often
   c. sometimes
   d. never

7. I feel my student is safe Ridgecrest.
   a. always
   b. often
   c. sometimes
   d. never

8. I am satisfied with my student's academic growth.
   a. always
   b. often
   c. sometimes
   d. never

9. Opportunities exist for all students, regardless of ability, to take challenging courses and move at an appropriate pace.
   a. agree
   b. disagree
   c. doesn't apply

10. Students at Ridgecrest accept each other without racial or ethnic prejudice.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know

11. The school buildings and grounds are clean and attractive.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know

12. When you need to talk to an administrator, can you do so with relative ease?
    a. always
    b. usually
    c. sometimes
    d. never
    e. doesn't apply

13. When I have concerns, the administrators or counselors at Ridgecrest are willing to listen to me.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know or doesn't apply

14. I am satisfied with the counseling services at Ridgecrest.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know or doesn't apply

15. Extra support is provided for students with language or learning problems such as ESL, Special Education, etc.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know or doesn't apply

16. How many of your students' teachers communicate with you when they have concerns?
    a. all
    b. most
    c. about half
    d. few to none
    e. don't know

17. How many of your students' teachers provide personal encouragement in their school work?
    a. all
    b. most
    c. about half
    d. few to none
    e. don't know

18. Teachers expect high quality work including homework from students at Ridgecrest.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know

19. Teachers are interested in and enthusiastic about their subjects and able to inspire students.
    a. always
    b. usually
    c. sometimes
    d. never
    e. don't know

20. How satisfied are you with the quality and variety of student activities that Ridgecrest offers.
    a. very satisfied
    b. satisfied
    c. they need improvement
    d. very dissatisfied
    e. don't know

21. In general, how satisfied are you with Ridgecrest?
    a. very satisfied
    b. satisfied
    c. I have no feelings either way
    d. dissatisfied

22. Does you child like school?
    a. always
    b. usually
    c. sometimes
    d. never

23. Does your child share school experiences with you?
    a. always
    b. usually
    c. sometimes
    d. never

24. Does your child have at least one friend at school he/she feels comfortable with?
    a. always
    b. usually
    c. sometimes
    d. never

25. How much time does your child spend in homework each week night?
    a. one-half hour
    b. one hour
    c. two hours
    d. three or more hours

26. Does your child have a specific time and area in order to do homework?
    a. always
    b. usually
    c. sometimes
    d. never

RIDGECREST INTERMEDIATE SCHOOL
TEACHER SURVEY

Mark the letter of your answer(s) on the Scantron form provided with a #2 pencil.

1. I am informed of events and happenings at Ridgecrest.
   a. always
   b. often
   c. sometimes
   d. never

2. I check to make sure the students know what I expect of them.
   a. always
   b. often
   c. sometimes
   d. never

3. I receive support with student discipline.
   a. always
   b. often
   c. sometimes
   d. never

4. Ridgecrest is a pleasant place to work.
   a. always
   b. often
   c. sometimes
   d. never

5. This school has adequate equipment.
   a. always
   b. usually
   c. sometimes
   d. seldom to never

6. This school has adequate supplies.
   a. always
   b. usually
   c. sometimes
   d. seldom to never

7. Teachers are treated with respect by most parents at Ridgecrest.
   a. always
   b. usually
   c. sometimes
   d. very seldom to never

8. Teachers are treated with respect by most students at Ridgecrest.
   a. always
   b. usually
   c. sometimes
   d. very seldom to never

9. I feel safe at Ridgecrest.
   a. always
   b. often
   c. sometimes
   d. never

10. Students, during school, treat school property with respect.
    a. always
    b. usually
    c. sometimes
    d. very seldom to never

11. I feel my students are growing academically.
    a. always
    b. often
    c. sometimes
    d. never

12. Opportunities exist for all students, regardless of ability, to take challenging courses and move at an appropriate pace.
    a. always
    b. often
    c. sometimes
    d. never

13. Regular classroom teachers and teachers who provide special services (GATE, special education, ESL) communicate with one another.
    a. always
    b. usually
    c. sometimes
    d. seldom or never

14. Students at Ridgecrest accept each other without racial or ethnic prejudice.
    a. always
    b. usually
    c. sometimes
    d. never

15. Students treat each other with respect at Ridgecrest.
    a. always
    b. usually
    c. sometimes
    d. very seldom to never

16. The school buildings and grounds are clean and attractive.
    a. always
    b. usually
    c. sometimes
    d. never

17. When you need to talk to an administrator, can you do so with relative ease?
    a. always
    b. usually
    c. sometimes
    d. never

18. When I have concerns, the administrators at Ridgecrest are willing to listen to me.
    a. always
    b. usually
    c. sometimes
    d. never

19. In general, how satisfied are you with the way you are treated by the administration?
    a. very satisfied
    b. satisfied
    c. I am neither satisfied nor dissatisfied
    d. dissatisfied

20. I am satisfied with the counseling services at Ridgecrest.
    a. always
    b. usually
    c. sometimes
    d. never

21. How often are you able to help students outside of class time?
    a. always
    b. usually
    c. sometimes
    d. never

22. How often do you provide students with personal encouragement in their school work?
    a. always
    b. usually
    c. sometimes
    d. never

23. I expect high quality work including homework from students at Ridgecrest.
    a. always
    b. usually
    c. sometimes
    d. never

24. I am interested in and enthusiastic about my subject(s) and try to inspire students.
    a. always
    b. usually
    c. sometimes
    d. never

25. How satisfied are you with the quality and variety of student activities that Ridgecrest offers.
    a. very satisfied
    b. satisfied
    c. they need improvement
    d. very dissatisfied

26. In general, how satisfied are you with Ridgecrest?
    a. very satisfied
    b. satisfied
    c. I have no feelings either way
    d. dissatisfied

27. How would you rate "school spirit" at Ridgecrest?
    a. excellent
    b. good
    c. adequate
    d. poor

28. How much help are you able to give students with their schoolwork?
    a. all the help they need
    b. most of the help they need
    c. about half the help they need
    d. very little to no help

29. Homework assignments are corrected and returned within one week.
    a. always
    b. usually
    c. sometimes
    d. rarely to never

30. Do most students seem to have at least one friend in your class?
    a. always
    b. usually
    c. sometimes
    d. don't know

Ridgecrest Intermediate School

28915 NORTH BAY ROAD • PALOS VERDES PENINSULA, CALIF. 90274
377.9508

March 6, 1989

Dear Parent:

Ridgecrest has been designated a state Partnership School, one of a selected group of intermediate schools chosen for this honor on the basis of its outstanding programs and willingness to share ideas with other schools throughout the state. One of the benefits of being a Partnership School is that Ridgecrest will receive special state funds, School Improvement Program, next year for program planning and development. The first step in this planning process is to survey parents, teachers, and students.

As a Ridgecrest parent, your opinions form an invaluable part of the planning process. Could you take five minutes to respond to the Ridgecrest Parent Survey? Please mark your answers on the enclosed Scantron answer sheet with a soft lead (#2) pencil. If you wish to make comments, you may write them on the survey or an additional piece of paper.

Please have your student return your answer sheet and any comments in the original mailing envelope to the office by March 17. Your responses are confidential and the return envelopes will be destroyed; if you wish, you may remove your name and address label from the envelope.

We feel we have a great school thanks to the students, staff, and parents. Thanks for your help in this survey which will enable us to become even better.

Sincerely,

William Erickson, Ed.D.
Principal

Step Three Appendices:

School Data Useful for Program Evaluation

School Data Useful for Program Evaluation

	Available	Location
Standardized (norm-referenced) achievement tests		
reading	____	____
mathematics	____	____
language	____	____
science	____	____
social studies	____	____
other_____	____	____
	____	____
State/District competency tests		
reading	____	____
writing	____	____
mathematics	____	____
other_____	____	____
	____	____
Classroom tests		
reading	____	____
mathematics	____	____
science	____	____
social studies	____	____
writing	____	____
other_____	____	____
	____	____
College Admissions Tests		
SAT		
ACT		
SAT Achievement Tests		
Advanced Placement Tests		
other_____		
Grades		
Grade point averages	____	____
Student report cards	____	____
Average grades given by individual teachers/ for courses	____	____
Attendance		
Average daily attendance	____	____
Percent unexcused absences/truancies	____	____
Absence by period	____	____
Individual student absences	____	____

Step Four Appendices:

How to Use Data to Answer Evaluation Questions

Idea Formats for Displaying Information

How to Use Data to Answer Evaluation Questions

How are we doing?

What do the data show about the current quality of student performance? Look at student status data and make a comparison with an appropriate group or your predetermined goal for the school.

- Compare student test results to the national or state norms.
- Compare student tests results to similar school's performance.
- Look at the percentage of students scoring above the 75th percentile; the 50th percentile; below the 25th percentile.
- Look at the percentage of students receiving certain essay scores or scoring at predesignated "mastery" levels.
- Look at the average scores for the SAT Achievement tests, ACT subtests, state honors or "regents" examinations, advanced placement tests, or international baccalaureate results.
- Look at current dropout rates; average daily attendance, percent of unexcused absences.
- Look at post high school placements in college, jobs, etc.
- Look at the percentage of Limited English Proficient, special Education, Chapter 1 students reclassified and average length of time in the program.
- Look at how parents, teachers, students rate their progress.

Are special subgroups of students performing as expected?

The important issue here is to make clear your expectations for special student subgroups such as Limited English Proficient, Chapter 1, special Education, Gifted, boys (in writing), girls (in mathematics and science), traditionally underachieving minorities. In general, our goal is for all groups to be performing equally well. For certain subpopulations, such as Special Education and Chapter 1 who are defined by discrepant performance, the goals are to increase performance and to increase the number of students "mainstreamed" or graduated from the program. For Gifted students, the expectation is that they will maintain their high performance over time and enroll in challenging courses.

- Look at your performance indicators by subgroup and identify discrepancies.

- Look at course enrollment patterns. Are any groups "excluded" from the more challenging courses? If so, why?

- Look at grade point averages and course enrollments for Gifted.

Are we doing better than before?

Review all of your performance indicators over a 3-5 year period. This is perhaps best done as a line graph or a high-low graph. Look for large changes in performance (about one-third to one-half a standard deviation for standardized tests) or in the percentage of students performing at levels you have previously defined as "acceptable."

- Look to see whether the general trend of your performance is increasing. Some fluctuation in performance is expected due to differences in student population from year to year.

- Look to see whether the fluctuations in your school's performance over time still places you in the performance range of similar schools or of schools you feel represent similar programs and populations.

Where are our strengths and weaknesses?

Your definition of expected performance is crucial here. A strength/weakness may be defined in terms of a comparison, in terms of trends over time, or in relative terms.

- When you look at performance across different subjects, are there areas that meet expectations/goals? Are some areas relatively low or low in comparison to a reference group?

- Look at trends across time for different subjects. Are some areas not improving or actually declining?

- If performance is uniformly high, are there some areas relatively lower?

What do the data reveal about reasons for our performance and how we might improve?

Here, the advice and experience offered by your steering committee will be helpful in suggesting areas to look for explanations. Some areas you could consider include:

- Look at achievement/results by subgroups to see if differential performance is partly responsible for results.

Do we do well simply because the 20% of high performing students raise our scores?

- Look at changes in students population or mobility rates.
- Look at the trend of variables related to student performance; attendance, length of time in the same school, socioeconomic status, language. Are increases or decreases in these variables over time coincident with achievement increases or decreases?
- Look at the curriculum offered different subgroups of students. Are differences in content/skills/pacing related to performance of subgroups?
- Look at student, parent, and teacher survey information. Do these suggest areas of weaknesses or reasons for performance?
- Graph or calculate correlations between variables related to outcomes such as the relationship between attendance and grade point average or scores; the relationship between years in the school at time for exiting the bilingual program.
- Look at observation and interview data as well as personal anecdotes to identify success stories and things that are working well.

Are program improvement plans proceeding as intended? What are our successes? What obstacles do we face?

- Look at observation and interview data. Listen to steering committee experiences. List the activities being implemented. Note problems encountered or successes attained.
- Look at student, teacher, parent survey data. Look for agreement as to program descriptions, activities. Look for reports of desired program outcomes such as increased writing, better attitude toward mathematics, more willingness to set aside time to study, etc.

IDEAL FORMATS FOR DISPLAYING INFORMATION

- Bar graphs are best for static comparisons and comparing unlike kinds of information. Plain "vanilla" bar charts help people make more accurate comparisons than pie charts, stacked bar charts, or three dimensional bar charts.
  - - Test results for one year
  - - Comparison of reading and mathematics results
  - - Percentage of people responding "Very Satisfied" to different questions on a survey
  - - Comparison of reading scores at different schools

- Line graphs are best for presenting trends. A single graph with multiple lines is better for representing multiple trends than several separate graphs.
  - - Reading and mathematics scores from 1985 - 1988
  - - Percentage of Limited English Proficient students since 1984 for the state, district, and school
  - - Trends in percentage of budget spent on certian categories such as salaries, supplies, security

- Pie charts are best for showing part-whole relationships.
  - - Percentage of LEP, FEP, English speaking students
  - - Percentage of budget spent on various categories
  - - Percentage of teachers holding emergency credentials

- Pictographs provide rapid general impressions.
  - - A graph composed of "happy faces" showing student attitude towards reading and mathematics
  - - A bar graph of dollar signs showing how utility costs have climbed since 1980

- Tables are best for providing exact numbers, but they are less likely to be read or understood than graphs.

GUIDELINES FOR CREATING EFFECTIVE GRAPHS AND TABLES

General Guidelines

- Do not write headings in all capitals. Use both upper and lower case.
- Sentences worded negatively are stronger than those worded positively. These are best used to present information that is contrary to a reader's expectations. Because negatively worded sentences are more difficult to understand and are so emphatic, use them sparingly.
- Questions at the beginning of textual explanations help readers focus on and remember important information.
- Color coded bars and lines on graphs help readers compare information more easily than lines and bars in the same color.

Bar Charts

- Information should be labelled directly on the chart rather than through a "key" or "legend".
- Horizontal bar charts leave more room for labels but may be more difficult to read.

Line Graphs

- Avoid clutter, both of lines and tic marks.
- Choose the range of tic marks to include the entire range of the data; avoid scale breaks.
- If scale breaks are necessary, do not connect numerical values on either side of a break.
- Choose a scale so that data fill up as much of the region as possible.
- Zero does not always have to be included in a scale.
- Use a logrithmic scale when presenting multiplicative factors.

Pictographs

- Symbols should be self-explanatory and easily differentiated from one another
- Quantity is better represented by increasing the number rather than the size of symbols.

Tables

- Round numbers to no more than two significant digits.
- Provide row and column averages.
- Use columns to display the most important comparisons.
- Order rows and columns by size of numbers rather than alphabetical order.
- Set rows and columns compactly so that the eye can make easy comparisons rather than spacing them out across the page.

HOW TO HELP PEOPLE BETTER UNDERSTAND INFORMATION

Keep the data simple

Be sure what you are reporting has a straightforward interpretation. For example, some districts report the level to which schools "attain goals." Thus, we see bar graphs showing some schools attaining more goals than others. However, what is confusing about these displays is that "goal attainment" is defined as students will answer correctly three-fourths of the items measuring an objective. By looking at bar graphs showing the number of goals mastered, people still have little understanding of what "mastery" means and of what learning is represented by the goals.

Stay close to the data

An axiom of the principle above, this guideline deserves reiteration. All too often, numbers suggest precision and meaning that simply aren't warranted. For example, many standardized tests, including the CAP, report "scale scores" which are logrithmic transformations of the actual number correct scores. A three digit CTBS or CAP scale score does not tell you directly how many items a student answered correctly or how far above or below the group average a student or school has scored. The scale score indicates at what difficulty level a student or school is functioning. More specifically, if a school CAP score is 320, you can say, the average item difficulty that students in this school can answer correctly about 50% of the time is at level 320. Thus, the average student in high scoring schools can answer more difficult items than the average student in low scoring schools. This comparison is not easy to make and is not the one that is generally made when CTBS and CAP scale scores are graphed. For many purposes, percent correct scores or median percentile ranks (plotted in normal curve equivalent units) present a clearer picture of school performance.

Limit your representation formats

Stick to a few types of tables or graphs when presenting information related to one topic. This allows people to make comparisons and inferences among different graphs or tables.

Clearly explain statistics

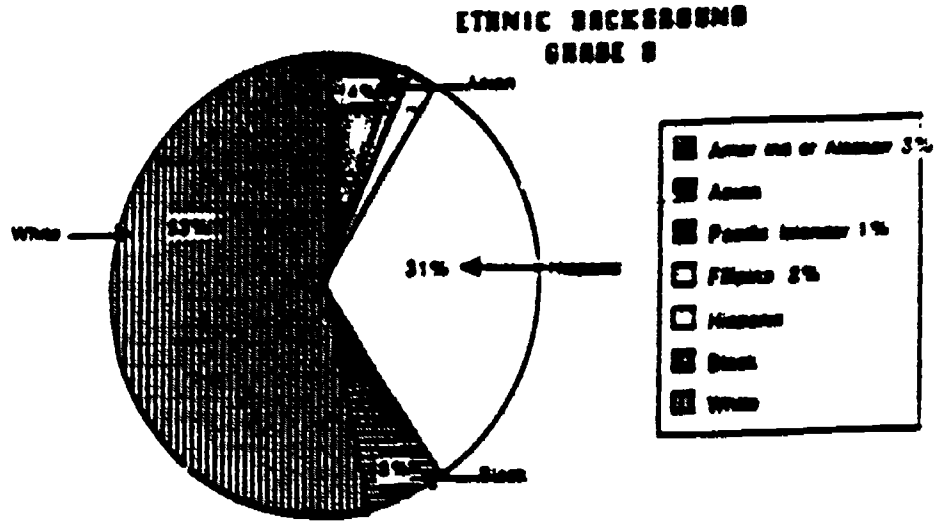
Users frequently misunderstand the statistical properties of data. They commonly assume upward or downward trends when in fact the variation presented is random. Users often give too much weight to the characteristics of small samples and assume them to be representative.

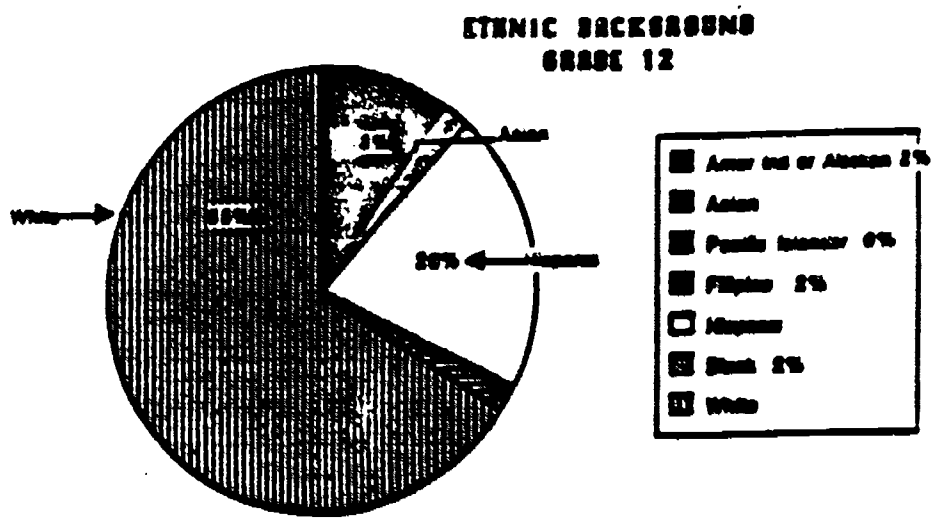
Test scores other than percentile ranks can be especially difficult to understand. Standard and scale scores need simple explanations. Clarifying the difference between percent correct and percentile may also be necessary.

Warn users when misinterpretations are likely to occur and point out the limitations and meanings of data. Distinguish between statistical and practical significance when presenting results of evaluations and research studies.

Descriptive adjectives make numbers more meaningful

When presenting information that is not easily understood, descriptive adjectives improve comprehension. For example, telling parents that students are performing "well when compared to peers" is clearer than saying, "students score at the 70th percentile."



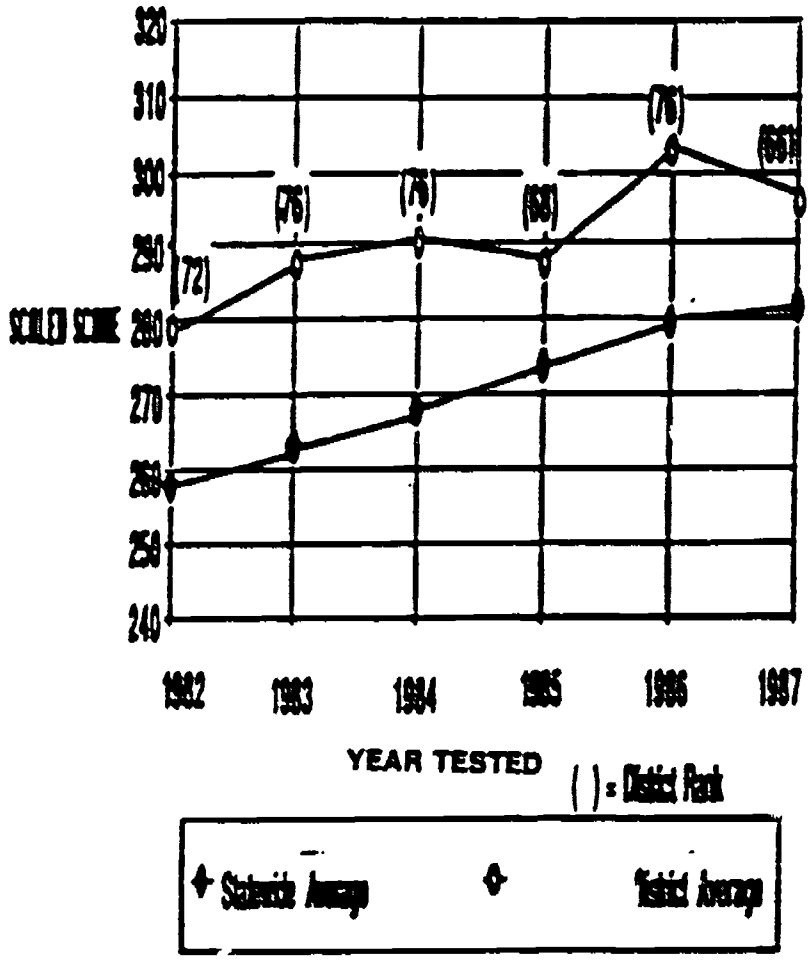


Provided by Dr. Stella Fort
Director of Research and Evaluation
Covina Valley Unified School District CA

The Pie Chart for Part-Whole Relationships

This display is an instance of effective use of pie charts. The reader instantly sees that a majority of district students are white and that the largest ethnic minority is hispanic and that there is a larger minority population at grade 8 than grade 12. This display raises the question: is school district population changing?

CALIFORNIA ASSESSMENT PROGRAM
SCALED SCORES 1982 - 1987
GRADE 3 - READING



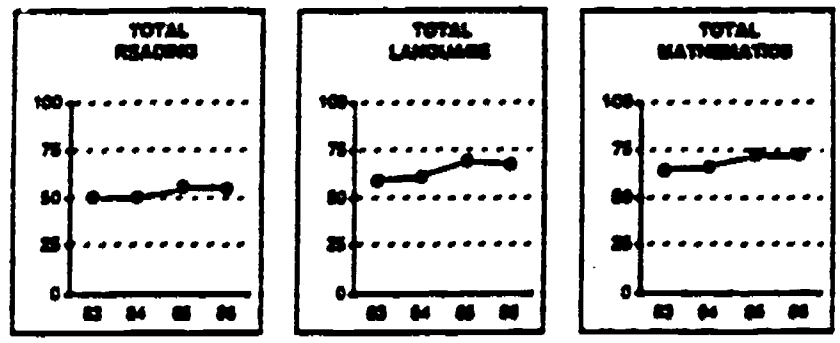
Provided by Dr. Stella Port Covina Valley Unified School District CA

A Line Graph for Trends Over Time

This graph incorporates several effective data display techniques. Trend data are presented with a line graph so that score variations are easily seen. Although scale scores are used for graphing (which is the correct metric for graphs), CAP scale scores do not have a direct interpretation. By including the state percentile ranks for each scale score point, the reader is provided with "simple" information that is easier to use and less likely to be misleading. For example, the dramatic rise in scale scores between 1985 and 1986, suggests the district has really improved. When this rise is compared with state trends (the bottom graph) and the actual percentile rank assigned, we see that the district needed to improve by 11 points in order to maintain the state rank it held in 1983 and 1984. On the other hand, the "dramatic" dip in percentile ranks between 1984 and 1985 was really the result of a minor score drop (2 - 3 points) combined with a relatively large increase in the state average. By providing the state trends, district trends, and district percentile ranks on one graph, the district shows how its ranking is affected not only by student performance but also by state trends.

GRADE 11

DISTRICTWIDE TESTING RESULTS
1982-83 THROUGH 1986-87



SCHOOL TEST RESULTS
FALL 1986

SCHOOL NAME	TOTAL READING	TOTAL LANGUAGE	TOTAL MATH
DISTRICT	64	67	72
CLAREMONT	41	56	57
CRAWFORD*	42	63	68
GOMPERS	76	61	67
HENRY*	58	72	76
HOOVER*	33	55	64
KEARNY*	45	69	70
LA JOLLA	74	78	81
LINCOLN	30	40	48
MADISON	48	64	70

SCHOOL NAME	TOTAL READING	TOTAL LANGUAGE	TOTAL MATH
DISTRICT	64	67	72
MIRA MESA	67	71	76
MISSION BAY	58	68	68
MORSE	48	69	72
MUIR ALTERNATIVE	56	42	46
O'FARRELL SCPA	58	70	70
POINT LOMA	69	70	70
SAN DIEGO*	37	51	61
SERRA	63	71	76
UNIVERSITY CITY	68	73	83

Graph and Table Combined

This seemingly clear presentation of historical trends for the district's standardized testing program is unintentionally misleading: 1) Percentile ranks aren't an equal interval scale and cannot be used for graphing; ranks should have been converted to standard scores as was done in the example on the preceding page. 2) Neither the score scale nor the graph is properly labelled. Percentile ranks do not go to "100". We do not know which test battery this reports (CTBS). 3) Data in the table are not labelled clearly: The table presents median percentile ranks. While this information is contained in the "text" of the report, properly labelled tables and graphs identify the score metric, the test battery, the year, and all information needed to interpret the data.

Two Page School Profile

Like the previous example, the following two page school profile is attractive and easy to read. There are twenty-two different kinds of information presented in this profile. Research suggests that people understand graphical and tabular information best when ideas are presented one at a time. On the other hand, people have a limited tolerance for reviewing pages of data. Here the issue is: What is the trade off between understanding and efficiency?

Test score data are presented in three ways: historical trends for mean scores; longitudinal trends for mean scores, and historical trends for distributions of scores. Notice that the correct metric was used for graphing--the normal curve equivalent, a standard score form of the percentile rank. Graphs are well labelled; we know which test was given, when, what the score metric is and the number and percent of students tested.

Variables that might have some influence on test scores are included on the information page: class size, student mobility, attendance, special programs, student ethnicity, and teacher education and experience.

However, the quartile distributions presented are not clear. Conventionally "box and whisker" plots show the distribution from the 25th - 75th percentile with the median marked. We have been unable to decipher exactly how these graphs represent Q1, Q3, their medians and the median of the distribution or why that information would be helpful.

A second shortcoming of this display is the presentation of "trend" data for student minority enrollment using the bar graphs. Parallel lines, each line representing a group, would show more clearly patterns of enrollment over time. Two pie charts, as we saw earlier, would allow readers to quickly compare the proportion of minortiy enrollment.

SCHOOL INFORMATION

TELEPHONE:

ADDRESS:

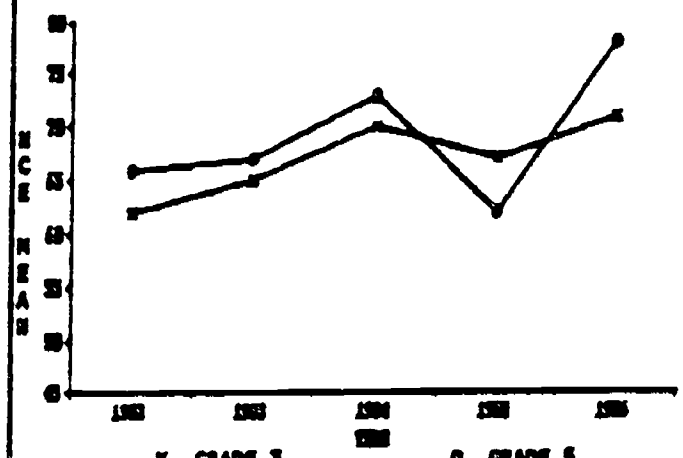
RECEIVING SCHOOLS:

HOURS OF THE SCHOOL DAY: 8:40 - 2:40

PRINCIPAL

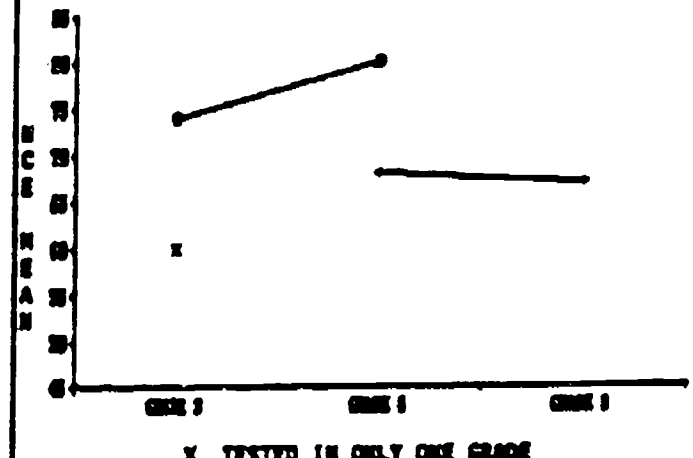
SYSTEMWIDE TEST DATA

HISTORICAL TREND FALL 1982 - FALL 1986, CAT TOTAL BATTERY



X GRADE 3 O GRADE 5

LONGITUDINAL AND NON-LONGITUDINAL RESULTS CAT TOTAL BATTERY

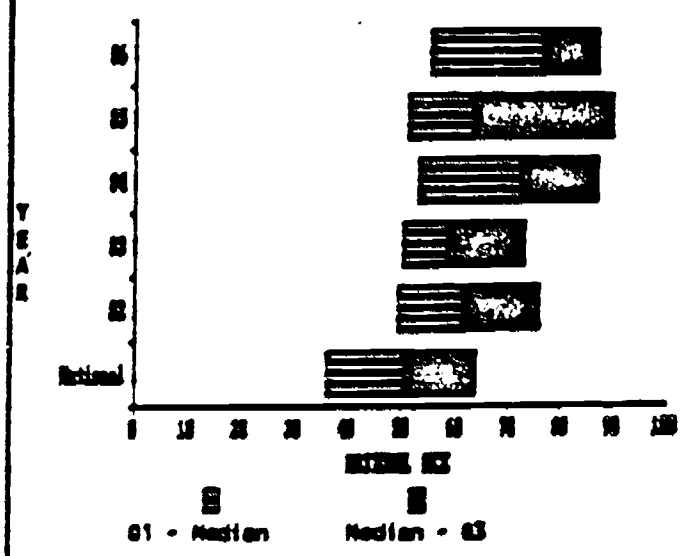


X TESTED IN ONLY ONE GRADE
O TESTED IN GRADES 3 & 5 + TESTED IN GRADES 5 & 8

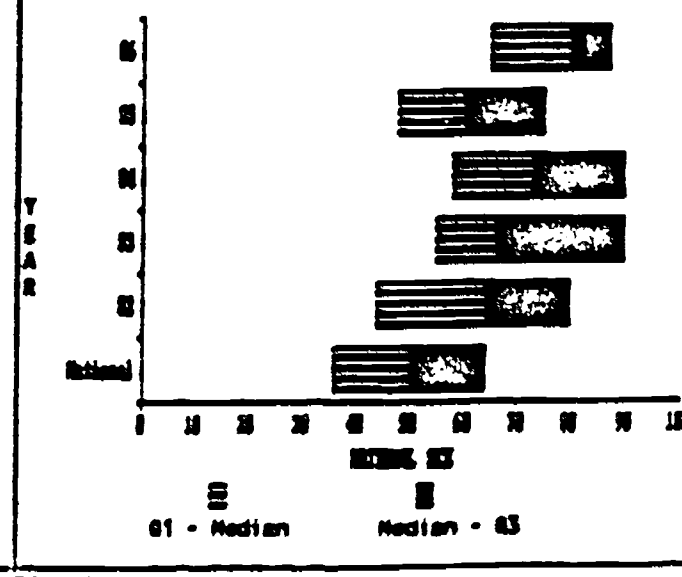
	GRADE 3		GRADE 5	
	N	%	N	%
1982.....	35	70	32	70
1983.....	34	72	47	89
1984.....	41	79	40	85
1985.....	53	93	47	87
1986.....	47	87	35	74

	GR 3	GR 5	GR 8
LONGITUDINAL GRADES 3-5 N.....	27	27	N/A
LONGITUDINAL GRADES 3-5 %.....	52	57	N/A
NON-LONGITUDINAL GRADES 3-5 N.....	14	8	N/A
NON-LONGITUDINAL GRADES 3-5 %.....	27	17	N/A
LONGITUDINAL GRADES 5-8 N.....	N/A	34	34
LONGITUDINAL GRADES 5-8 %.....	N/A	64	N/A

CAT NORMAL CURVE EQUIVALENT AT 1ST QUARTILE (Q1), MEDIAN (Md), AND 3RD QUARTILE (Q3), GRADE 3, FALL 1982 - FALL 1986



CAT NORMAL CURVE EQUIVALENT AT 1ST QUARTILE (Q1), MEDIAN (Md), AND 3RD QUARTILE (Q3), GRADE 5, FALL 1982 - FALL 1986



COURTESY OF MONTGOMERY COUNTY SCHOOL DISTRICT

Elementary School

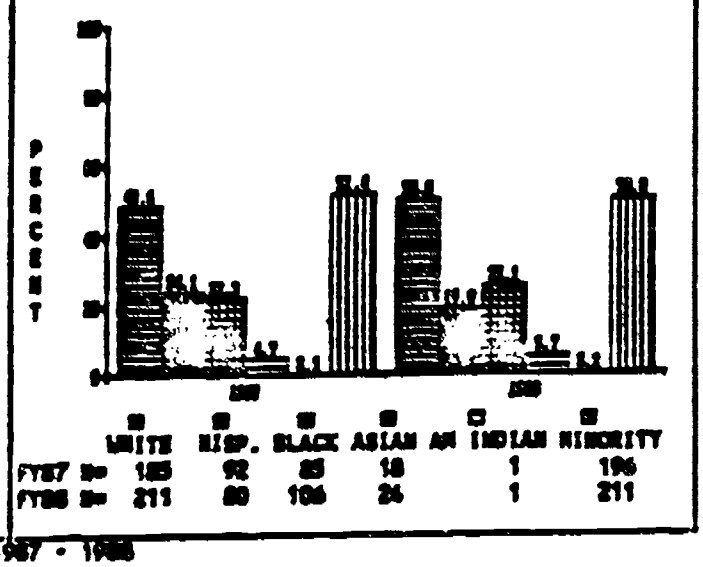
SCHOOL DATA

	#		%	SPECIAL PROGRAMS
Enrollment Capacity	363	Percent Utilization	116.3	Chapter 1/State Comp. Ed.
Student/Professional Staff Ratio	13.9	Student Mobility Rate	45.0	Full Day Kindergarten
Average Class Size	22.4	Average Pupil Attendance	93.6	Day Care $3;$5*
		Pupils Transported	70.7	

PUPIL DATA

ENROLLMENT	1986-87 #	1987-88 #
GRAND TOTAL	391	422
Special Education (Self Contained)	1	1
Head Start	0	0
Kindergarten (Half Day)	0	0
Kindergarten (Full Day)	75	87
Grade 1	82	81
Grade 2	69	77
Grade 3	54	76
Grade 4	53	57
Grade 5	47	45
Grade 6	0	0
TOTAL (1-6)	305	334

MINORITY ENROLLMENT



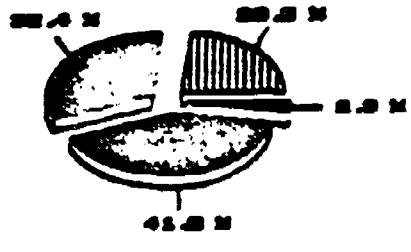
STAFF POSITIONS 1987 - 1988

PROFESSIONAL STAFF	#	FTE
Total Professional Positions	34	30.2
Kindergarten Teachers	4	4.0
Classroom Teachers (1-6)	17	16.5
Special Education Teachers	0	0.0
Head Start Teachers	0	0.0
Reading Teachers	1	1.0
Disadvantaged Teachers	1	0.5
Resource Room Teachers	2	1.5
Art, Music, Instrumental Music, and Physical Education Teachers	4	2.1
Media Specialists	1	1.0
Guidance Counselors	1	1.0
Speech Pathologists	1	0.6
ESOL Teachers	1	1.6
Principal/Assistant Principal	1	1.0
Other Professional Staff	0	0.0

SUPPORTING SERVICE STAFF	#	FTE
Total Support Positions	17	11.5
Regular Classroom Aides	9	5.3
Special Education Aides	0	0.0
Media Center Aides	1	0.5
Other Instruction-Related Positions	0	0.0
Security Aides and Student Behavioral Assistants	0	0.0
Secretarial, Business, and Similar Positions	2	1.5
Custodial, Cafeteria, and Similar Positions	5	4.2
TOTAL NUMBER OF POSITIONS	51	41.7

STAFF CHARACTERISTICS 1987 - 1988

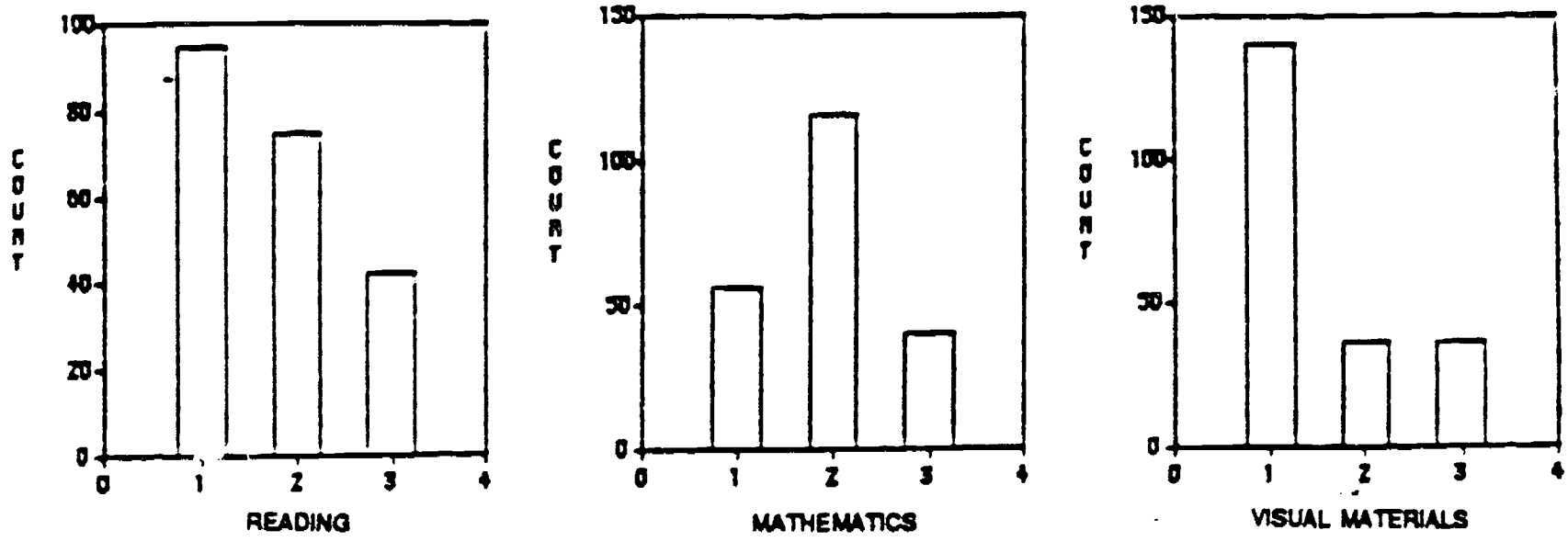
PROFESSIONAL STAFF DEGREE STATUS



	Professional #	Professional %	Supporting Service #	Supporting Service %
ETHNIC BACKGROUND				
White	26	76.5	9	52.9
Minority	8	23.5	8	47.1
SEX				
Male	4	11.8	2	11.8
Female	30	88.2	15	88.2
YEARS OF EXPERIENCE				
4 or less	6	17.6	4	23.5
5 - 15	18	52.9	7	41.2
16 or more	10	29.4	6	35.3

*This program is not funded by MCPS; see page 377 for explanation of Day Care codes.

NUMBER OF STUDENTS SCORING BELOW, AT AND ABOVE GRADE LEVEL: ITBS, 1988



GROUP 1: 1 - 39TH PERCENTILE

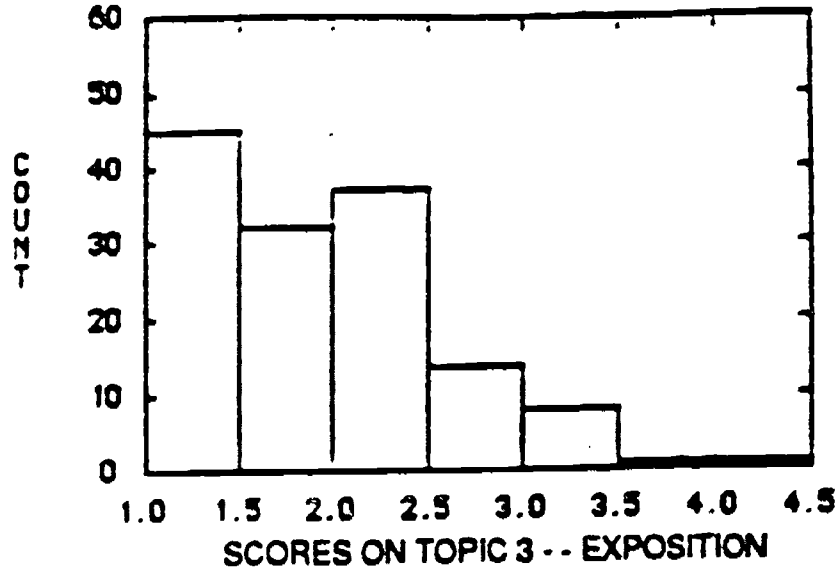
GROUP 2: 40TH - 70TH PERCENTILE

GROUP 3: 71ST - 99TH PERCENTILE

Distributions of Special Groups

It is often useful to look at distributions for special groups as a way of understanding where the majority of students are performing. The histograms on this page show how many students in grade 4 are performing below, at, and above grade level on the ITBS Reading, Mathematics, and Visual Materials tests. These groups were arbitrarily defined using percentile rank ranges. What is useful about this display is that we can see the bulk of the students perform in the low range on Visual Materials and Reading to some extent. Mathematics performance is "average" with few high scoring students. A histogram comparing the three tests would not have highlighted the significant difference in the pattern of student performance that these "grouped" distribtuion were able to do.

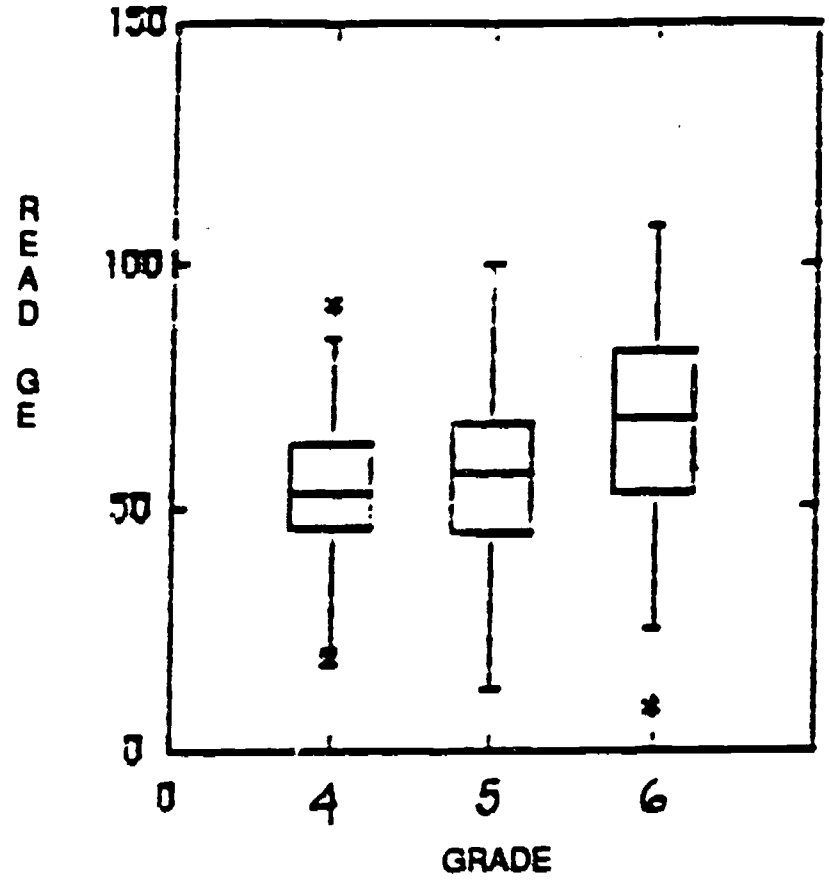
NUMBER OF STUDENTS RECEIVING WRITING SCORES 1 - 5



Frequency Distribution Using a Histogram

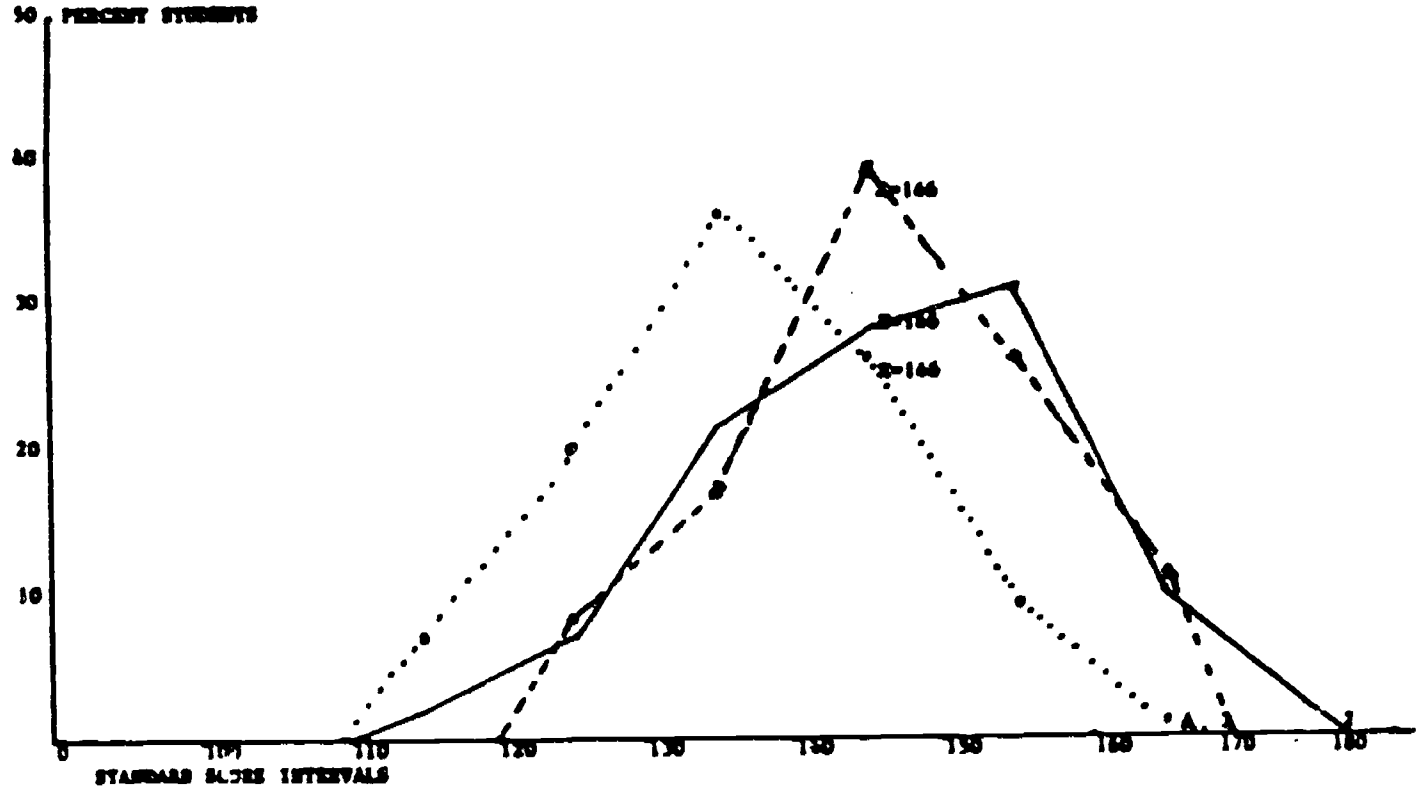
Compare the frequency distribution using a histogram with the box and whisker plot and the line graphs on the following pages. The histograph does provide a general picture: we do know the majority of the students received writing scores below 2.5 and few were rated a "4" or "5". Histograms present one type of data quite clearly but don't provide much opportunity for comparing distributions.

25TH PERCENTILE, MEDIAN, AND 75TH PERCENTILE
FOR THE ITBS READING COMPREHENSION TEST: 1988



Box and Whisker Frequency Distributions

This display used box and whisker plots to characterize score distributions in Reading for grades 4, 5, and 6. The lower side of the box marks the 25th percentile point, the line in the middle is the median score and the upper end is the 75th percentile point. The "whiskers" extend to the upper and lower score points. When "stars" extend beyond the whiskers, they mark outlier scores that may be distorting the distribution's mean and standard deviation (see grade 6). Box and whisker plots make comparing distributions simple. We see that the median scores in reading don't really increase much from grades 4 through 6, but by grade 6 the lower scoring students have improved and we are increasing scores at the high end as well. The relatively low median at grade 5 seems to result from a wide spread of student performance and a significant number of low scoring students.

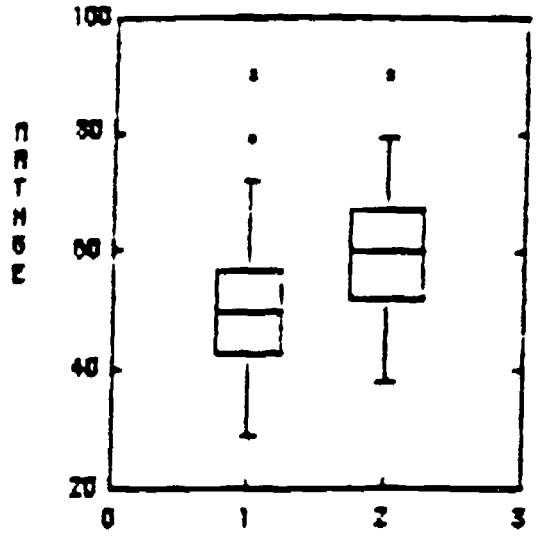


DISTRIBUTION OF GRADE 5 MATHEMATICS SCORES
ITBS: 1984, SCHOOLS 2-4

Line Graph Frequency Distributions

Line graphs are used more often than box and whisker plots to show the entire distribution of student scores. Line graphs (frequency polygons) were chosen for this display to make an important point: Even though the three schools being compared had identical mean ITBS standard scores, their students are performing quite differently. In school 2, the mathematics scores are quite spread; high scoring students "pulled up" the mean. School 3 shows that the mean characterizes fairly well student performance. Few students score much above or below 146. School 4 shows a school that looks to be performing as well as the others but in fact needs improvement. Most of the students are scoring below the mean and its highest scoring students are still lower than those in schools 2 and 3.

DISTRIBUTION OF MATH SCORES
FOR STUDENTS SCORING LOW AND HIGH IN SELF-CONCEPT

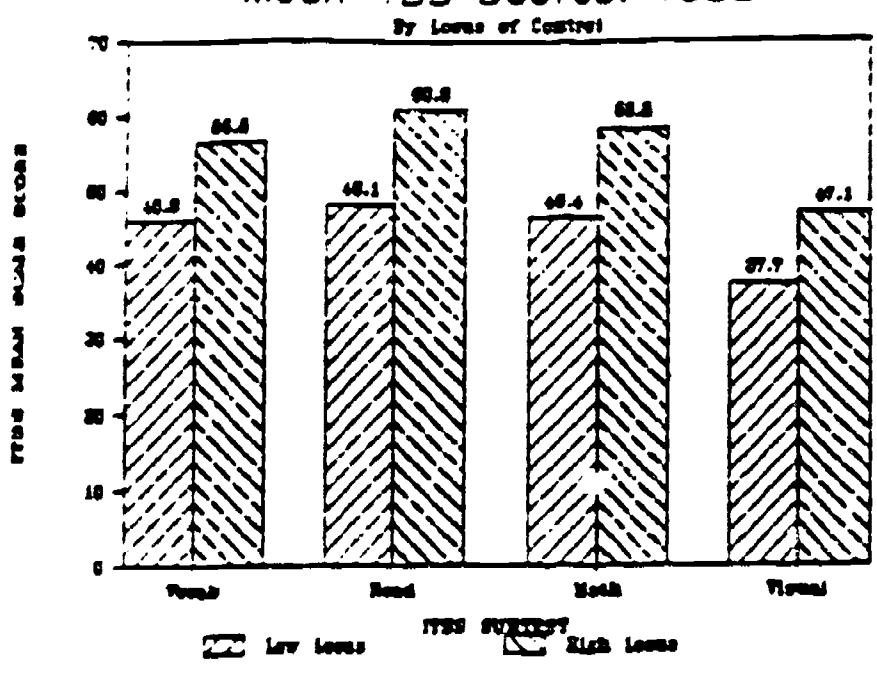


REFERENCED BASED SELF CONCEPT

1 = LOW (BOTTOM 27% OF SCORES)
2 = HIGH (TOP 27% OF SCORES)

Displays Showing Relationships: Distributions of Two Groups

Graphs can convey relationships more powerfully than words. The two box and whisker plots shown compare the distributions of mathematics scores for students who scored low on Referenced Based Self-Concept with those who scored high on this measure. Referenced Based Self Concept is one attitude scale on the School Attitude Measure (American Testronics, 1980). It measures how students think other people, teachers, family and friends, feel about their ability to succeed academically. What is interesting about graphing the relationship between attitude and mathematics scores is that we see a real difference in mathematics performance of the two groups. This suggests that we investigate effects of tracking, teacher expectancy, and family expectancies in our effort to improve student mathematics performance.



Displays Showing Relationships: Co ring the Means of Two Groups

The histogram compares the ITBS means . students scoring high and low on the Locus of Control scale of the Student Attitude Measure (American Testronics, 1980) for four subtests: Vocabulary, Reading, Mathematics and Visual Materials. The graphs show that students who score high in Locus of Control (student feelings about ability to take responsibility for performance) have higher achievement test scores. They also suggest that this sense of control may have more of an impact in reading and mathematics or be more strongly related to reading and mathematics achievement than vocabulary and map skills. This possible relationship suggests that we may need to provide different kinds of feedback to students about their performance and to help them attribute their academic successes (and failures) to factors they can control as one strategy for improving academic skills.

Step Five Appendices:

Profile of Albert Einstein Middle School

Report to Parents

PROFILE OF Albert Einstein MIDDLE SCHOOL

Address: 9325 Mirandy Drive
Sacramento. CA 95826
Telephone: 454-8241

The Albert Einstein Middle School was built (or remodeled) in 1966. The school principal is Bayne Sutton. The school occupies 22 acres and has 42 classrooms.

School Enrollment

Albert Einstein school serves students in grades 7 - 8, and can hold up to 930 students without modification. The school had 909 students enrolled in November, 1985. Enrollment for the 1986-87 school year is estimated to be 905. Last year, there were 42 teachers and other certificated staff at Albert Einstein school, and the average class size was 25 students.

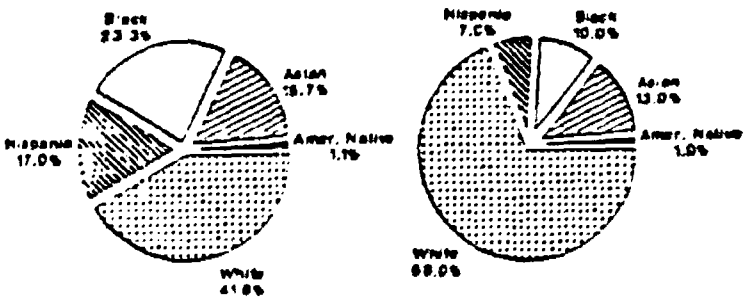
Enrollment at individual schools is affected by permits and alternative programs. During a typical month in 1985-86, 25 students living in the Albert Einstein school attendance area attended other district schools while 5 students from other district schools enrolled at Albert Einstein school. In contrast, a typical district school had 37 permits in and 74 permits out.

Student Attendance

In a typical month during the 1985-86 school year, Albert Einstein school had 94 percent attendance. The district's average daily attendance is called ADA. District middle schools had 93 percent attendance (ADA) during the same period. School districts receive most of their money from the state on the basis of ADA.

Student Population

The racial/ethnic makeup of the students at Albert Einstein school and the district in the fall, 1985, is presented in the charts below:



DISTRICT SCHOOL

Albert Einstein school has 16 students who speak another language and are limited in their use of English.

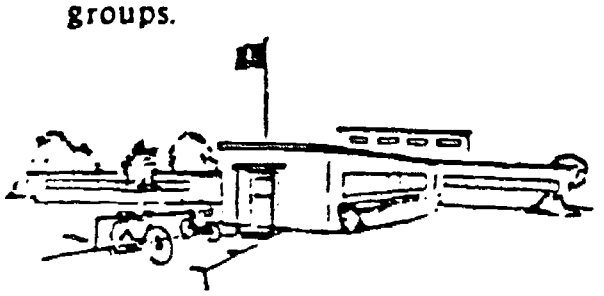
Special School Programs

Albert Einstein school has the following special programs for its students:

GATE classes; resource specialist classes for 55 students; and a learning handicapped class for 10 students.

School Use By Others

Albert Einstein school is also used by community groups when school is not in session. Last year, community groups used this school 321 times for activities. District schools had an average of 206 uses by community groups.



PROFILE OF Albert Einstein MIDDLE SCHOOL

STUDENT ACHIEVEMENT

California Assessment Program

The California Assessment Program (CAP) tests all students in the state when they are in grades 3, 6, 8 and 12. Middle schools have reports for students in grade 8. The most recent scores are from the spring of 1986. Scores for students at Albert Einstein school are compared with the average scores made by students in the Sacramento City Unified School District. The 1986 scores in reading, language and math are:

Grade 8	District	School
Reading	218	245
Language	224	259
Math	234	256

Proficiency Tests

Students in middle school take a three-part proficiency test in grade 8. Last year, the percent of students at Albert Einstein school passing each part of the proficiency test was:

Reading	74%
Writing	74%
Math	76%

Reading for Pleasure

Eighth grade students were asked to tell the number of hours they spent on a typical weekday reading for pleasure. District students spent 1 hour. Students at Albert Einstein school spent 1 hour(s) reading for pleasure.

Student Opinions

Middle school students were asked if their instruction in reading and math was helpful. In the district, 2 out of 3 students said that the instruction was helpful. Students at Albert Einstein school responded as follows:

Is instruction helpful? YES
Reading instruction: 51%
Math instruction: 77%

Parent Opinions

A sample of 15% of the families at every school were sent surveys about the school programs. From Albert Einstein school, 44 parents responded to the survey. Parents reported that 26 of them or 59 percent are satisfied with their child's academic growth at school.

Middle school parents from throughout the district (288) responded that 2 out of 3 believe the school programs in reading, language and math are successful, and half are satisfied with their child's academic growth at school.

Time On Homework

District eighth grade students reported that they spend an average of 1 hour(s) each weekday doing homework outside of school. Students at Albert Einstein school spend an average of 1 hour(s) on homework each weekday.

Middle school parents in the district reported that 82 percent thought the schools gave sufficient homework. For Albert Einstein school, 86 percent of 44 parents agreed that their children receive sufficient homework.

PROFILE OF Albert Einstein MIDDLE SCHOOL

School Buildings

When students were asked whether their school grounds and buildings are clean and attractive, only about one-third of the middle school students reported that they were. At Albert Einstein school, 23 percent of the students reported that the school was clean and attractive.

Parents were also asked about school cleanliness and maintenance. Across the district, parents gave the schools better marks than the students, with about 3 out of 4 parents reporting that the schools were clean and attractive. Of the 44 parents at Albert Einstein school who returned surveys, 82 percent reported that this school was clean and 82 percent said this school was attractive.

Following School Rules

School employees were asked how well students followed the school rules. According to 67 percent of the middle school personnel, students do a good job of following school rules.

When asked about how students treat school property, only 15 percent of the middle school students felt that other students treated school property with respect.

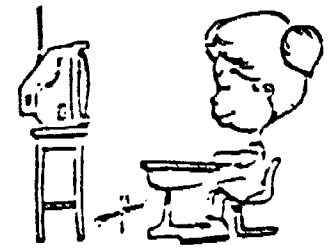
School Expectations and Student Progress

When the district personnel were asked whether or not enough information is given to parents about school expectations, 68 percent of the middle school personnel felt that sufficient information was given to parents. Of the personnel at this school, 75 percent thought that enough information was given.

When middle school staff were asked if parents received enough information about student progress, most of them (84%) said that parents did.

District parents reported that 82 percent understand the grading policy at their child's middle school. At Albert Einstein school, 35 parents, 80 percent of those surveyed, reported they understand the grading policy.

Time Watching T.V.



Eighth grade students told how much they watched T.V. on a weekday. District students averaged 3.1 hours, and students from Albert Einstein school averaged 3 hour(s).

Learning Environment

District middle school students in grades 7 and 8 report that half of them (51 percent) like school. Students at Albert Einstein school reported that 49 percent like school.

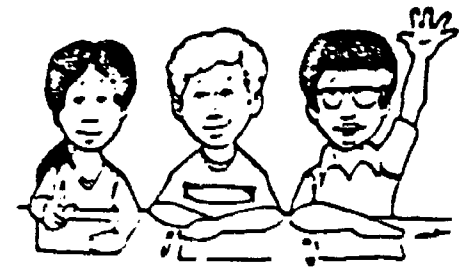
Parents at Albert Einstein school reported that 64 percent of the 44 surveyed believe their children like school. District-wide, parents were positive, with 78 percent feeling that their children like school.

Middle school personnel in the district reported that 91 percent liked working at their school, compared with 92 percent of those at Albert Einstein school.

PROFILE OF Albert Einstein MIDDLE SCHOOL

Usefulness of Learning

When students were asked whether or not they felt what they were learning was useful, district-wide, 75 percent of the middle school students thought that what they learned was useful. At Albert Einstein school, 75 percent of the students thought what they learned was useful.



District Finances

In 1985-86, the Sacramento City Unified School District received $2400 from the state, plus $563 from other sources, making a total of $2963 for each student attending the district.

Last year, the district spent 89.4% of its income for staff salaries. The district spent 5.4% of its income on maintenance, utilities and insurance. Books, supplies and equipment used 4.6% of the budget. The small amount of the budget that remained was used for other operating expenses.

Profile Information

The surveys referred to in this report include a student survey given to all students in grades 7 and 8 (with an 86 percent response rate); a staff survey given to teachers and all other district staff (with a 71 percent response rate); and a parent survey sent to a random sample of 3930 homes (15% of the families). Responses were received from 2240 parents. The district parent survey has a margin of error of 2 percent--percents reported might vary by plus or minus 2.

The information in this profile was gathered and prepared by the Administrative and Evaluation Services Office. It presents the most current information as of August, 1986. For further information, call 454-8601.

Sacramento City Unified School District
1619 N Street • Sacramento, California • 95814 •

Report To Parents

Northview High School

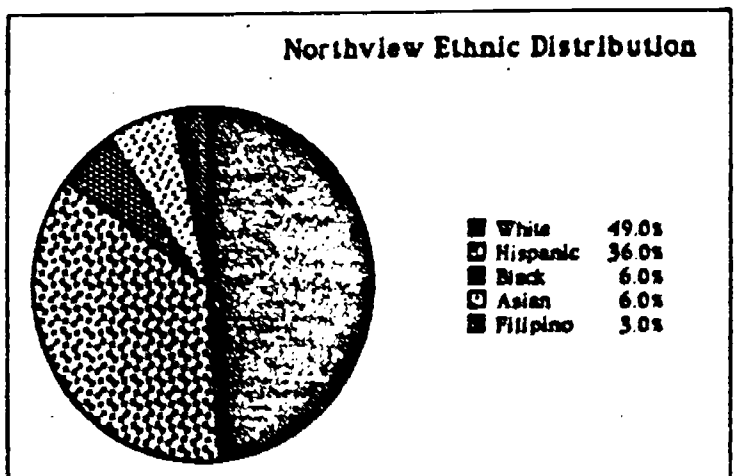
1016 West Cypress Ave.
Covina, CA 91722
(818) 331-3371

Mr. Roy Moore, Principal

November 1990

School Profile

Northview High School is one of three comprehensive high schools in the Covina-Valley Unified School District. The enrollment as of October 1, 1990 was 1,034. The ethnic makeup of the school is indicated on the following chart:



Note: Because of rounding, the percentages may not total to exactly 100%.

Northview High School was built in 1959 and is located on a forty-acre site. There are 13 buildings, 49 classrooms, a career center, a library, a cafeteria, a gymnasium, two locker rooms, a lecture hall, and an administration building. In addition, we have one portable building that has two classrooms in it. The buildings are one story and the low profile campus is open and attractive.

Instructional and Support Staff

Northview High's teaching staff includes 37 regular education teachers and 3 special education teachers. All teachers have assignments within their credential authorization.

Additional personnel include the school principal, an assistant principal, two deans, a student activities advisor, three counselors, a librarian, four secretaries, eight clerical assistants, a registrar, six custodians, and a cafeteria manager. Part-time personnel include five janitors, a kitchen staff of 14, seven instructional aides, four parking lot supervisors, and a piano accompanist.

In addition, psychologists, nurses, speech and language specialists, an audiologist, and an adapted P.E. specialist are available to provide support in meeting the academic, personal, and emotional needs of our students. Child abuse prevention programs and a crisis response team are also in place.

Advanced degrees are held by 66% of the certificated staff.

Quality of Instruction and Leadership

All students are expected to develop effective oral and written communication skills, solve mathematical problems and think logically. Teachers use instructional strategies that promote active involvement of all students and administrators serve as instructional leaders. A continuous effort is made to ensure that all students regardless of special need, e.g., limited English speaking, special education, gifted, have access to the core curriculum.

The quality of the school's instructional program is assessed every 6 years by the Western Association of Schools and Colleges.

During the last accreditation the visiting committee stated that the strengths of the school were:

- The staff for its dedication, openness and response to the needs of the Northview students.

- The staff for its commitment and caring for one another.
- The District, administration and staff for maintaining an attractive and functional school plant which enhances the educational program within the existing fiscal limitations.
- The classified staff for its demonstrated support of the instructional program, positive attitude, and ability to foster good communication between the school and the community.
- The administration for support shown to new teachers.

Climate for Learning

Northview High's goal is to provide a positive climate for learning in order to assure student achievement, enhance self-esteem, and develop positive social behavior. To reach this goal, Northview High School has the following opportunities for student participation and recognition:

- ASB Leadership
- Athletics
- Clubs
- Choral Music
- Journalism
- Marching Band
- Scholarship Awards
- Yearbook
- Student of the Month Award
- Principal's Honor Roll
- Valle Vista Five
- Girls' State
- Boys' State
- Floyd Myrick Award

Students are encouraged and expected to maintain appropriate behavior at all times because classroom disruptions interfere with learning. School rules and procedures are distributed and discussed on a regular basis. Parent support in recognizing their children for positive efforts in this area benefits the education program.

Textbooks/Instructional Materials

Textbooks and other instructional materials are reviewed and recommended by District curriculum study groups. There is a study group for each subject area which includes teacher representatives from each intermediate school and high school in the District. The Curriculum Development Advisory Board (CDAB) approves selections and the Board of Education makes the final approval.

Teachers in all subject areas can make recommendations for new textbooks as needed, but, for the major subject areas, a seven-year revision cycle is followed. Revisions have been made in language arts and mathematics and new materials have been purchased. Social science is presently being revised. All other textbooks are current.

The library contains 27,000 volumes and is staffed by a librarian, a library clerk and a textbook clerk. There are 33 computers arranged in the following manner: Nineteen computers are clustered together in a laboratory setting in a classroom and 14 are used by individual teachers throughout different classrooms in the instructional program.

Curriculum Improvement and Training

Each major subject area is reviewed and revised at least every seven years. After curriculum is revised and new courses of study or course descriptions are written, appropriate instructional materials are selected and staff in-service programs designed. New programs are developed based on the latest research in curriculum and instruction and State frameworks.

Many in-service opportunities are available for teachers and administrators during school, after school and during the summer. Teachers, administrators, and support staff receive training at the school, the District Office or attend workshops or conferences throughout Southern California. Presenters are often Covina-Valley Unified School District teachers, many working as Mentor Teachers with special projects such as Math Manipulatives, Cooperative Learning, The Writing Process, The Use of Literature in the Classroom and Learning Styles. Most in-service opportunities are directly related to new directions in the curricular program and new teaching strategies.

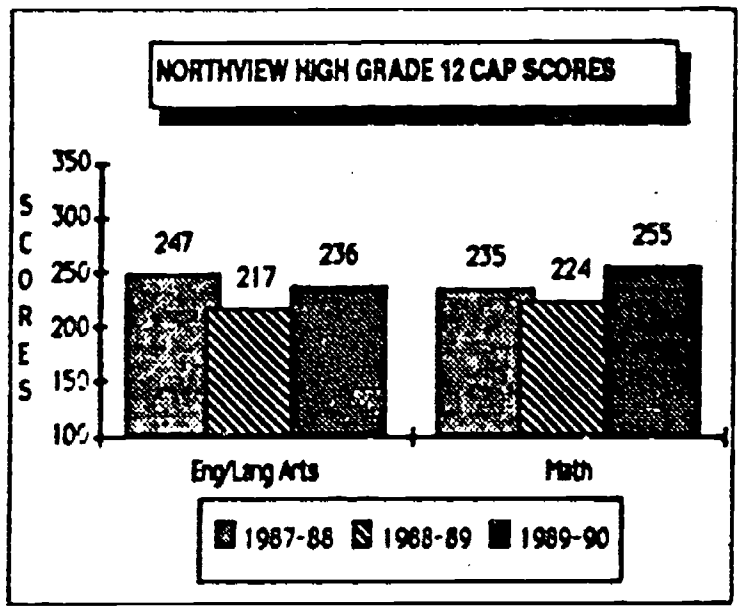
New teachers receive training before their first teaching day and continual support from many sources including Mentor teachers.

Teacher Evaluation and Professional Improvement

The purpose of the teacher evaluation process is to promote quality instruction. While all teachers are observed and evaluated informally on an ongoing basis as needed, under the law nontenured teachers are formally evaluated in writing every year and tenured teachers at least every other year. Examples of evaluation areas are instructional methodology, suitable learning environment, and classroom management. Teachers and principals receive appropriate training in these areas.

Academic Performance

Seniors at Northview High School took the California Assessment Program (CAP) exam in December of 1989. The exam uses a scale from 100 to 400, with the statewide average set at 250 the first year the test was administered. In December 1989, Northview seniors scored 236 in English-language arts and 255 in mathematics. The following graph shows a three-year comparison of scores:



Student Attendance and Dropout Rates

During the 1989-90 school year, there was an average daily attendance of 93.1% of all students at Northview High School. It is estimated that 1% of student attendance days were generated by students who did not attend full minimum instructional days because of unexcused absences. Parents are encouraged to have their sons and daughters attend every day during the school year. Success in school depends on the ability to acquire specific skills and knowledge in all classes every day of the year.

The following table shows dropout numbers for Northview High School for the past three years:

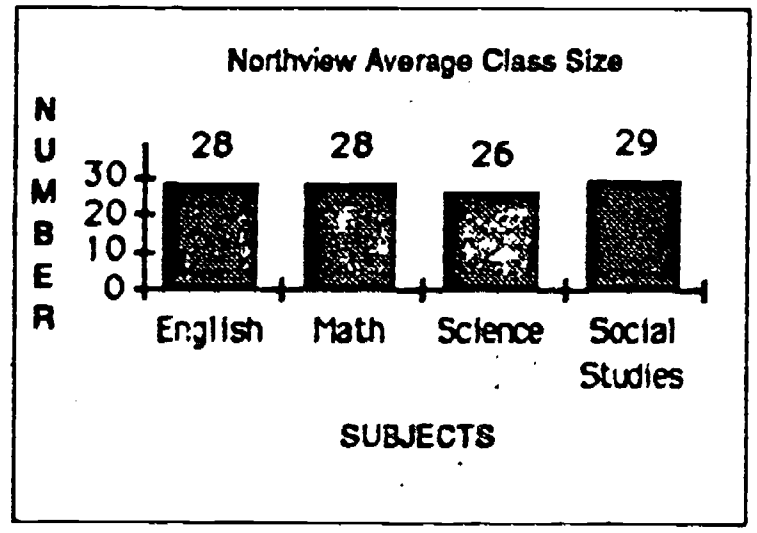
Northview High	Number of Dropouts
June 1987	10
June 1988	4
June 1989	9

The Covina-Valley Unified School District offers several alternative programs to students who have dropped out due to pregnancy, drug problems, abuse or academic difficulties. Examples of such programs are:

GED Preparation Program
Teen Mother Program
Independent Study Program
Regional Occupational Program
Tri-Community Adult Education

Class Size

California ranks highest in the nation in the number of students per teacher. As of October 1, 1990 Northview's average class size was 28.0 students per teacher. The graph below shows the average class size in four academic disciplines:



Substitute Teachers

When teachers are absent, it is the District's goal to employ the highest quality substitutes available. Because there is a general shortage of substitute teachers throughout California, the District maintains a competitive substitute salary rate and has an ongoing recruitment program to employ qualified substitute teachers. All substitute teachers hold a valid California teaching credential based upon a bachelor's degree and have passed the California Basic Educational Skills Test (CBEST) when that is a requirement; many of them, including those who have retired from Covina-Valley, have regular teaching experience.

District Expenditure

The C-VUSD is spending an average of $4,125 per student for all educational services including salaries, instructional materials, maintenance, transportation, and capital expenses.

In addition, our school receives specialized funds for the following programs:

Chapter 2
Gifted and Talented Education (GATE)
Limited English Proficient (LEP)
Special Education
10th Grade Counseling
SB1882 (Staff Development)

State law requires that comparative salary and budget information — which is taken from documents available to the general public — be displayed in each school's Report to Parents:

Salary Categories (1988-89)	Covina-Valley's Average		Comparison – State Average Districts over 1,500 ADA *	Comparison – State Average District over 5,000 ADA *		
Teachers'	Annual Salary	Daily Pay	Annual Salary	Annual Salary	Daily Pay	Annual Salary Range
Beginning	$20,790	$112	$22,186	$22,805	$123	$18,196-$28,331
Mid-range	$39,810	$215	$34,851	$35,239	$192	$29,525-$39,873
Highest	$43,530	$234	$42,053	$42,931	$234	$35,121-$48,865
School Administrators' (average)	$57,427	$262	$50,883	$50,829	$233	$24,547-$62,860
Superintendents	$77,376	$344	$70,086	$72,158	$322	$34,844-$92,430
Budget Percentages (1988-89)						
For Teachers' Salaries	41.30%		43.50%	43.66%	32.80%-49.37%	
For Administrative Salaries	4.65%		5.67%	5.84%	4.34%-8.56%	

* ADA means Average Daily Attendance

Safety

As part of the school's commitment to a safe and orderly campus Northview High School has an earthquake/ emergency preparedness plan and conducts regular fire and emergency drills.

Safety concerns, when identified by the District safety committee or the school staff, are referred to the District Maintenance Department for correction.

COVINA-VALLEY
UNIFIED SCHOOL DISTRICT

BOARD OF EDUCATION

Agnes F. Garwacki
Mary L. Hanes, M.D.
Richard K. Harder
Gilbert R. Ramirez
Ellen F. Sandt

Jack H. Rankin, Ed.D.
District Superintendent

Sample Data Base

Background Information About Students

- Age
- Grade level
- Sex
- Ethnic background
- Time at current school
- Time in district
- Attendance/absence rate
- Socio-economic status
- Language status
- Special program participation

Information on Student Outcomes

- Reading achievement
- Math achievement
- Attitude toward Reading
- Attitude toward Math
- Attitude toward School

Classroom Processes

- Use of instructional time
- Expectations of achievement
- Amount of homework
- Use of individualized instruction

School Context

- School climate
- Parent participation

Step Six Appendices:

Sample Data Base

Sample Data Base

Background Information About Students

- Age
- Grade level
- Sex
- Ethnic background
- Time at current school
- Time in district
- Attendance/absence rate
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