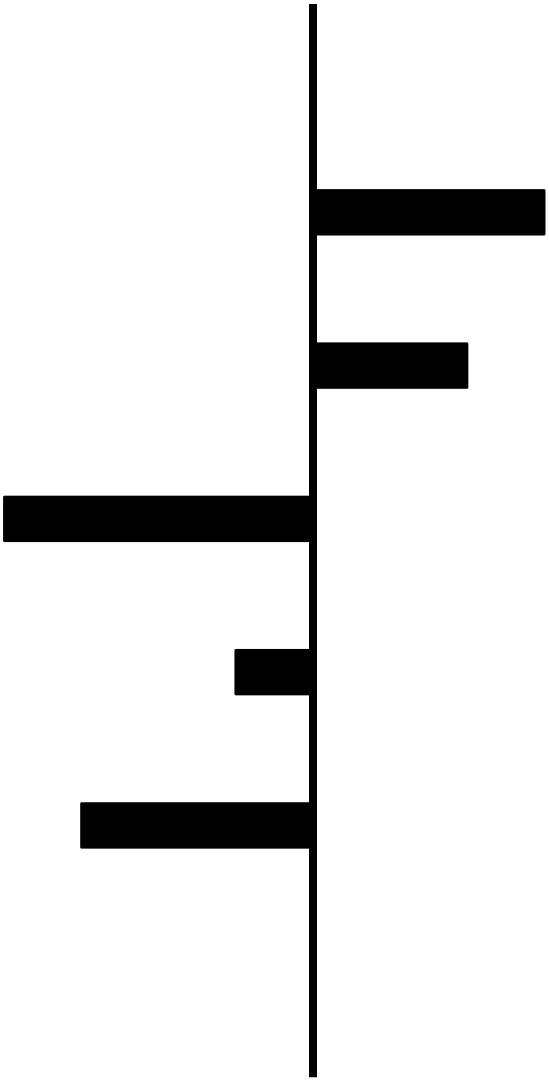

The Effective School Battery®

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User's Manual

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Preface

The Effective School Battery (ESB) was developed to provide schools with needed information about themselves. Information is essential to improving the performance of any organization. It is a stimulus to change and develop, it provides feedback that reinforces organizations and the workers in them as they make progress, and it allows the evaluation of improvement programs. This manual describes the practical applications of a set of school assessment tools so that any school or school system will be able to assess itself. These assessments should stimulate action to improve school programs and provide a basis for ongoing monitoring of accomplishment.

The development of the Effective School Battery (ESB) depended on the help of thousands of students and teachers who shared their views about their schools and provided information about themselves. Nisha Advani, Michael Cook, Deborah Daniels, Denise Gottfredson, Deborah Ogawa, Don Rickert, Norm Ringel, Jane St. John, and Carol Yamasaki worked with schools to help them prepare for some of the surveys involved, and they worked with these organizations to interpret and use information from the surveys. Many public school officials and members of the staffs of several community-based organizations assisted in the surveys, and worked with us in interpreting and acting on the results. I am grateful for their advice and the advice of several school board members about the development of the ESB. The ESB could not have been created without their able help.

Delbert Elliot, LaMar Empey, Joyce Epstein, Doug Grant, Joan Grant, Travis Hirschi, and John Holland gave valuable advice on the construction of the student questionnaire, not all of it taken. Raul Romero translated the student questionnaire into Spanish, and Monserrate Diaz and Ciorah Montes helped with aspects of the translation. Dennis Dillon of Intran Corporation managed the optical scanning. Monseratte Diaz, Barbara Tatem Kelley, Vermont McKiney, and Emily Martin of the U.S. Office for Juvenile Justice and Delinquency Prevention cleared the way for our surveys to proceed and helped to resolve countless problems along the way.

Deborah Kimiko Ogawa helped perform many of the initial item analyses, and Donald Rickert helped me sort through mountains of potential items gleaned from previous research to assemble the initial draft of the student and teacher questionnaires. Don Rickert also helped manage the optical scanning and file construction work. All data management was under the supervision of Denise Gottfredson, who was assisted by Don Rickert, Helene Kapinos, Richard Joffe, Rob Kirchner, Stuart Gavurin, and Andrea Nuzollo. Lois Hybl provided office support throughout the development of the ESB. John Holland provided valuable advice on the manuscript for the ESB manual.

The development of the ESB was made possible by grants from the National Institute of Education, U.S. Department of Education, which sponsored most of the psychometric work summarized in this manual and the writing of the manual itself. Many of the original data on which the manual's technical section are based were collected under a grant from the National Institute for Juvenile Justice and Delinquency Prevention, U.S. Department of Justice, as part of the evaluation of school-based delinquency prevention projects. The opinions expressed in the manual are mine, and do not necessarily reflect the position or policy of either institute nor the opinions of any of the many people for whose help I am grateful.

The Job Satisfaction scale is an abbreviated form of Robert Hoppock's Job Satisfaction Blank No. 5, copyright Robert Hoppock, 1935. The Interpersonal Competency scale is a modified form of John Holland and Leonard Baird's scale with the same name, copyright John Holland, 1969.

Finally, any scientist who undertakes a long-term project such as the development of the ESB needs the support and reassurance of friends. Michael Cook, Denise Gottfredson, and John Holland helped me maintain portions of my sanity during this period through their much valued friendship and intellectual stimulation.

GDG
October 1984

Contents

Chapter 1
Using the Effective School Battery

The Effective School Battery is a scientifically developed instrument for assessing the climates of secondary schools. It can be used to identify a school's strengths and weaknesses, to develop improvement plans, and to evaluate improvement projects. The Effective School Battery (or ESB) is the result of research on school climate at the Center for Social Organization of Schools at the Johns Hopkins University. The ESB makes use of modern computer technology to score and report information about school climates, but technical knowledge is not necessary to use the ESB. Technical information about the battery is presented in this manual for the psychometrician and researcher, but users do not have to be technical experts or necessarily understand all parts of this manual. Any administrator, board member, teacher, or parent (and most secondary school students) can understand the school climate information derived from the ESB.

In assessing school climate, students and teachers answer questions about their school, and these answers are analyzed by a computer. The computer analysis produces a profile of the school that describes the school using a set of "scales." The scales of the ESB summarize information about the school's climate in an organized and easy to interpret fashion. School climate assessments can be used in many ways. This chapter describes some of the more common uses and suggests some additional innovative ones.

Practical Applications

A climate assessment should perform at least two functions. First, it must tell a school something useful about itself. It must yield information that is helpful in understanding what the school is like in comparison to other schools, show the school's strong points and weaknesses, and provide a benchmark for planning and evaluating school improvement projects. This information should help teachers, administrators, parents, and students make good decisions about a school's practices and policies. Second, a climate assessment should be useful to superintendents, board members, and community groups who must set educational priorities and make decisions about the allocation of resources and personnel. A climate assessment should provide useful and detailed information about individual schools so that decisions can rely in part on the unique characteristics of each individual school.

The ESB can be used in several ways to perform these functions. Some are listed below. Creative users will discover new ways to put climate assessments to work.

Setting Priorities and Making Plans in a School

Every year, perhaps every day, people in a school must make decisions about their school. For people who work in or study in a school, few things are more important to the quality of their lives than the climate of the school. Usually, schools have only limited ways of knowing about themselves. Information about standardized achievement test scores, attendance records, and the like are usually available. And, most people in a school have formed general impressions of things they like and things that bother them about their institution. But comprehensive information about the safety of the school, the clarity and consistency of school rules, student and teacher satisfaction with school, and morale are generally not available.

Planners should have dependable information about all aspects of the school's current level of effectiveness, about programs available for school improvement, as well as access to sound professional advice. The ESB has been designed to provide dependable information that decision makers need about their school. The information it provides is directly applicable in the development of school improvement plans. Of course, other information — standardized achievement test scores, disciplinary records, data about staff turnover and student retention rates — should also be used in making school plans. The ESB profiles offer information about the perceptions of students and teachers about the school's climate, but the information it produces should be supplemented with other information.

The ESB gives administrators, teachers, and board members two kinds of information about the school: (a) It describes the perceptions that students and teachers have about the climate of the school, and (b) it describes some characteristics of the students and teachers in the school. The perceptions of students and teachers about the school are called *psychosocial climate,* and the characteristics of

students and teachers are called *school population.* Two profiles are produced to show scores for nine psychosocial climate scales based on teacher reports and six psychosocial climate scales based on student reports. Two other profiles are also produced to show scores for seven teacher characteristics and twelve student characteristics. These profiles allow users to compare any school to other schools.

The scores are presented so that it is easy to identify areas where improvement in school climate would be desirable, as well as in areas where the school climate is already good. The profiles can help develop priorities for school programs aimed at improving overall school effectiveness.

Opening up Communication in a School

Occasionally schools experience problems that are not openly discussed by teachers, administrators, and students. A school climate assessment based on the ESB can help to open up and focus discussion about the strengths and weaknesses of a school. Students and teachers can candidly state their views using the structure that the climate assessment instruments provide. The profiles summarize and integrate the views of many individuals so that it can be reasonably certain that broad rather than isolated experiences are considered. Often a review of the ESB profile raises topics of general concern within a school which have been ignored or overlooked — sometimes for many years. Differences of opinion between students and teachers, or teachers and administrators can be examined once they are identified through the structure provided by the ESB. This examination can form the basis of a common understanding of school priorities and goals.

Through an examination of ESB scores, topics that may not otherwise have emerged can be discussed. The ESB can serve as a catalyst to planning in a school and to addressing problems or issues that would otherwise remain unattended. Alternatively, administrators and teachers may be reassured by a profile that shows their school climate to be generally positive, suggesting that they are on the right track with present programs.

For example, one school — when presented with an ESB profile that showed teacher morale to be very low and showed that students were both disruptive and unclear about school rules — decided that the quality of life for everyone in the school depended on improvements in discipline. Planning teams composed of teachers and administrators were formed to work on clarifying school rules and making sure disciplinary procedures were followed. New disciplinary procedures were instituted and gradually a new climate of enthusiasm was created as school members realized that they had more control over their school climate than they had previously believed. The stimulus provided by a concrete portrait of their school prompted this school to take action to solve some pressing problems.

Evaluating School Programs

Climate assessment is an important tool in evaluating the effectiveness of school improvement projects. The scales of the ESB provide concrete indications of increases in the effectiveness of school programs in many areas. For example, school safety is a matter of concern in some locations. A school initiating a program to increase safety can use the teacher and student Safety scales in the ESB to monitor progress in creating a safer environment. Similarly, school districts concerned with developing programs to increase school safety can test alternative programs in different schools and use the standardized safety measures in the ESB to compare the relative effectiveness of alternative programs. Schools and school districts with personnel trained and experienced in evaluation can design their own evaluations, and others can seek the assistance of professionals to design and interpret experiments in school improvement.

Providing Ongoing Indicators of Organizational Health

Schools and school systems concerned about monitoring school effectiveness in a comprehensive way need comparable indicators of how they are doing from year to year. The ESB can serve as one component of a comprehensive set of performance indicators. These indicators alert administrators to changes in the conditions of their schools as they emerge. These same indicators inform administrators about the effectiveness of actions taken to change these conditions. Ongoing indicators of organizational health provide school boards, administrators, teachers, and the public with information about the consequences of changes made in schools or school systems. Informed decisions about school consolidation, grade level reorganization, desegregation plans, and the like require uniform indicators of school climate. No one would base decisions in these areas solely on school climate measures, but school climate is an important consideration in making these decisions.

System-Wide Planning and Assessment

School boards and superintendents are

responsible for the ways schools in their systems are run. To set goals and assess progress in meeting them, managers need tools that measure the effectiveness of schools. Most districts have a limited set of tools for this purpose. They use information about expenditures, standardized achievement test scores, attendance records, and major disciplinary events such as suspensions. The scope of information available for planning and assessing progress is increased by the use of school climate measures. Test scores and attendance are important, but the ESB assessment may suggest clues to the causes of attendance, disciplinary or academic problems, as well as implying the steps that can be taken to correct them. The collection and use of information about school climate helps those who run the schools to focus their attention on the quality of instructional life within the schools.

As school systems and the communities within which they operate increasingly come to realize that public perceptions of the schools influence voter decisions about school bond issues and decisions of corporations about locating in the community, system administrators will increasingly be concerned with ensuring a climate of safety and orderliness in schools. They will need the kinds of information about school safety, student and teacher satisfaction, and morale that the ESB provides.

Some Research Uses

The research applications of the ESB are wide-ranging. Creative investigators always need sound measures of schools. They will find the scales of the ESB valuable in studies of classroom organization, school rules, in-service training, teacher classroom practices, and administrator style. Some of the ways school climate measures can be useful in research are described below.

Identifying Types of Schools

Schools differ from one another in many ways. The ESB can be used to describe the climates of schools, within which particular research projects are conducted, to provide a context for understanding research results. Instructional techniques can be tested in schools with differing climates to learn about the generality or specificity of the effects of these techniques. Some instructional methods may work better in some kinds of schools than in others. Demonstrating the effectiveness of new techniques or technologies in a number of schools differing in climate can help to establish the general usefulness of the methods.

School typologies also raise questions about how the types have come about. Do different kinds of communities lead to schools with distinctively different climates? How does administrator style contribute to the kinds of climates schools evolve? In what ways do inner-city and suburban schools differ? Research in these areas (G. Gottfredson & D. Gottfredson, 1985; Wiatrowski, Gottfredson, & Roberts, 1983) is only beginning, but it suggests that community influences may shape school climates in important ways.

Understanding the Effects of Public Policy

Researchers can broaden their research on public policies by examining the effects that such policies have on school climates. For example, Crain and Mahard (1982) have suggested the use of school climate measures in policy-related research on school desegregation. Desegregation programs may lead to changes in teacher morale, school safety, and other aspects of climate that have major policy implications. Similarly, researchers can contribute to knowledge about the effects of grade level organization (e.g., middle vs. junior high school organizations), school size, centralization of decision making and other structural options available to school systems by studying the relations of organization to school climate using the ESB measures.

Understanding the Behavior of Principals

Much remains to be learned about how principals influence the schools they administer. What administrator behaviors lead to positive staff morale and student satisfaction, to school orderliness, to student effort on school work? Knowledge in this area can contribute to the training, selection, and assignment of school administrators, and individual administrators can use this information to improve their working styles. The scales of the ESB provide measures that researchers can use in developing knowledge about administrative behavior.

Which Parts of This Manual Should You Read?

This chapter has described some of the uses of the ESB. Subsequent chapters describe the ways school climate is assessed and summarize the development and properties of the ESB. A clear knowledge of the material in subsequent chapters is helpful in making the best use of climate assessments, although all users will not need to be familiar with the technical details described in the rest of the manual. Some users will want to read only the parts relevant to their use of the ESB, leaving a thorough

understanding of the technical material to measurement specialists. Chapters 4 through 6 contain technical material, and the material in chapters 3 and 7 is somewhat technical but should be easily understood by most educators. At the same time, anyone helping a school interpret its school climate profiles should read and have a thorough understanding of Chapter 8, which illustrates the interpretation process and provides some important guidelines for interpretation. *To get an overview of the ESB and how it is used to assess schools, read Chapter 2 (which describes the materials used) and Chapter 8 (which discusses some illustrative school profiles).*

Chapter 2
Assessment Materials and Scoring

The materials required for school climate assessment with the Effective School Battery (ESB) include two inventory booklets (one for students and one for teachers), two answer sheets (one for students and one for teachers), and a survey coordinator's manual. The *student inventory* is an eight-page booklet designed for use with an optically scanned answer sheet. Students answer questions about themselves and the school using multiple-choice, agree-disagree, or true-false formats. The *teacher inventory* is an eight-page booklet also designed to be used with an optically scanned answer sheet. Teachers answer questions about themselves and the school using the same formats used by the students.

The student and teacher inventories that compose the ESB may be used in tandem or separately. Although most schools will want to use both inventories in conducting climate assessments, some will want to use only student or teacher inventories.

Maintaining Privacy

When a school's climate is assessed, everyone must feel free to offer a frank account of his or her views and experiences. The answers of any particular individual are of no special value; what is important is the typical or average report of representative members of a school. Profiles show pooled or averaged responses based on the reports of large numbers of students and teachers. Students and teachers completing inventories do not write their names on the answer sheets. This makes the inventories easier to complete and guarantees anonymity of responses while providing the necessary information.

The Student Inventory

In completing the student inventory, students answer the questions contained in a booklet by marking the appropriate answer with a lead pencil on an answer sheet. A sample booklet is available in the ESB Specimen Kit.

The Items

The student inventory has four parts:

Part 1. What about you? These items ask for descriptive information about the student — gender, ethnicity, age, grade, educational standing and aspirations, and the educational background of the student's family. This information can be used to provide schools using the ESB with a description of their students that can be used to compare inventory results with the results of schools with similar composition. Students usually find it easy to answer these non-threatening questions, and doing so gets them used to the answer sheets.

Part 2. How do you spend your time? The items in this section ask students about their participation in a variety of in- and out-of-school activities, the amount of effort they spend on school work, and the friends with whom they spend time. The answers to these questions are used to measure student involvement in activities, effort expended on school work, and the kinds of peer influence to which students are typically exposed.

Part 3. Your school. In this section students are asked a variety of questions about their school — about the school's rules, and about student government and student influence on the way the school is run. The answers to these questions are used to measure a number of aspects of school climate, including school safety, clarity and fairness of school rules, school planning and action, and respect for students. Some questions are also used to measure student alienation, attachment to school, and the extent to which students experience rewards and punishments in school.

Part 4. What do you think? The final section contains a list of true-false questions asking what the student thinks about a variety of statements. These statements are matters of opinion which assess some aspect of the student's psychosocial development. These items contribute to the measurement of student alienation, self-concept, and belief in conventional rules. Answers from the large number of students who complete the inventory are pooled to obtain assessment of the psychosocial standing of the students as a group. These pooled or averaged results are profiled to provide a portrait of a school's studentry. Embedded in this list of true-false items is an index of careful responding — an invalidity scale. If students report, for example, that they do not like to have fun or that they read several whole

books every day, they are probably not answering the inventory in a careful way.

The four-part design serves two main functions: (a) It labels the content of each section so that students have a general idea of the content in the section; and (b) it introduces some variety into the inventory so that students stay interested in answering the questions.

Selection of Items for the Student Inventory

Three primary concerns guided the selection of items (questions or opinion statements) for inclusion in the student inventory: (a) Items were chosen to cover the dimensions school climate research has shown are important or that practitioners are concerned about; (b) items had to work; that is, every item had to contribute to the reliable and valid measurement of the dimensions of climate covered; and (c) items were chosen that seemed in good taste, did not offend most people, and were easy to answer. The specific rules followed in selecting items are elaborated in the following list:

1. Each item had to meet technical criteria for contribution to a scale as indicated by item analyses. Psychometric methods provide indicators of the extent to which an item contributes to reliability. Items that seemed sensible on inspection but which did not help create reliable scales were rejected.

2. Items should cover diverse aspects of school climate. For instance, an inventory that covered a single aspect of school climate such as student satisfaction would be useful for some purposes, but in developing the ESB a goal was to measure multiple aspects of school climate.

3. Culture-bound items were avoided. Efforts were made to write generic items that are within the experience or potential experience of students of both genders, of every ethnicity, and at every level of socioeconomic standing. For example, items asking about participation in specific religious groups or in activities found only in certain geographic areas of the United States were avoided, and the student involvement measure asks about such a broad array of activities that nearly all students will have been exposed to at least some of them. Nevertheless, it is neither possible nor desirable to eliminate all vestiges of cultural loading in an inventory. In one Puerto Rican community where the ESB was used, homework was not routinely assigned and therefore students report spending little time on homework. But time spent on homework is such an important issue that the decision to retain items about homework was made. Furthermore, some activities — rightly or wrongly — are usually pursued by members of only one sex. Far more cheerleaders are female than male, and far more members of school athletic teams are male than female. Because participation in such activities is important, items asking about participation in them were retained, but were made as generic as possible by asking about participation in athletic teams rather than about participation in specific sports such as football.

4. The items should have the same meanings for males and females, and for members of different ethnic groups. Care was taken to select items that are interpreted in the same way by everyone. Regionally specific language was avoided, simple wording was preferred, and items were examined statistically to select items that met the criterion of common meaning. Item analyses were conducted separately by gender and for groups differing in ethnicity to ferret out items that seemed to mean different things to different groups.

5. Items should not anger, annoy, or offend most people. This is a difficult criterion to meet, because almost anything can offend at least someone. Many things that school officials would very much (and legitimately) want to know about their schools involve matters that some people in the community do not want asked about. Many communities experience growing problems with the use of drugs by young people, and some principals who helped in developing the ESB wanted to have detailed questions about the use of specific drugs included in the inventory. Other principals were concerned about violence in school and urged the inclusion of self-report measures of delinquent behavior. Other people do not believe such questions should be asked of students in school. All items were carefully discussed with students, parents, principals, and school superintendents to identify potentially offensive questions. In addition, the experience of extensive field trials of the instruments helped to locate potentially sensitive items. Despite the loss of useful information that results from the deletion of some items, items that offend more than a small fraction of persons have been eliminated. There is no guarantee that no one will be offended or find comfortable every item that remains, but every effort has been made to

create a palatable, inoffensive, and appropriate inventory.

6. Wording should be simple and items should be easy to read. Items that were found to be difficult to read or hard for respondents to interpret were rejected. Sentences were kept short; polysyllabic words were avoided. Instructions are written clearly. The reading level of the inventory is in the upper part of the grade 5 range according to the Flesch (1951) method of determining readability. This means that about 50% of all fifth graders should experience little difficulty in reading the questionnaire in the Spring of their fifth grade. The vast majority of older students should be able to read the items in the inventory with ease. The student inventory is recommended for use with students in grades 6 or 7 through 12. It is not recommended for elementary school students.

7. Students should find the inventory interesting. The aspects of school climate that are most important to students, and the aspects of their school lives that are most salient, are what the inventory seeks to measure. Efforts have been made to eliminate questions students find irrelevant or meaningless. Most students find taking the inventory an interesting experience, and often say they are grateful their opinions have been sought.

The Teacher Inventory

In completing the teacher inventory, teachers answer the questions contained in a booklet by marking the appropriate answer with a lead pencil on an answer sheet. A sample is available in the ESB Specimen Kit.

The Items

The teacher inventory has 12 parts:

1. **Background information.** This section asks for descriptive information about the teaching staff that is useful in making comparisons with other similar schools.

2. **Involvement of parents.** This section asks about parent-teacher interaction and community involvement.

3. **Classroom management and teaching practices.** This section asks about the use of rewards in the classroom and the school and about grading practices.

4. **Resources.** This section asks several questions about the availability of resources for instruction.

5. **Job satisfaction.** This section asks how much teachers like their jobs.

6. **Training and other activities.** Part 6 asks questions about committee work and in-service training.

7. **Interaction with students.** Teachers are asked about the extent of their involvement with students in a variety of ways.

8. **School rules and discipline.** This section asks about the clarity of school rules and how they are enforced.

9. **How different groups get along.** This section asks about race relations and relations among different groups in the school. Because some schools still have students and faculties of only one ethnic group, some of these items will be irrelevant for such schools. Because of their importance in other schools, however, the minor irritation caused by asking irrelevant questions in a small number of schools is unavoidable.

10. **Personal safety.** This section asks questions about classroom disruption, the safety of the school, and personal experiences of victimization and incivility.

11. **Your opinions.** In Part II, teachers are asked their opinions about a number of statements that measure attitudes about race relations and authority.

12. **School climate.** This final section asks teachers about school administration, relations between teachers and administrators, and general staff morale.

Selection of Items for the Teacher Inventory

The same general principles followed in constructing the student inventory were applied in developing the teacher inventory. Items were selected to cover the most important aspects of school climate from the teacher point of view. The development of this instrument was facilitated greatly by relying on extensive data derived from the National Institute of Education (NIE, 1978) Safe School Study; many of the items were drawn from

the instruments used in that major study.

The item content focuses on issues central to the day-to-day activities of teachers in the school. Most teachers report that completing the inventory is interesting.

Answer Sheets

The ESB booklets are used with separate answer sheets. Students and teachers use pencils to fill circles on these answer sheets, which are numbered and labeled to correspond to questions in the inventory booklets. Machines (optical scanners) read these answer sheets, and computers calculate scores on the scales. These scores are then transferred to profile forms.

Care in filling in answer sheets and in shipping materials to the scoring service is required. Stray marks must be avoided because they may be read as responses; and wrinkled or folded answer sheets may be rejected by the scanning machine. The booklet and answer sheets provide instructions for the use of the answer sheet, and these instructions should be followed carefully.

Profile Sheets and Interpretive Materials

Each school's climate results are summarized on special forms called "profile sheets." These profile sheets are designed to be self-interpreting. If the entire ESB is being used, each school has four of these profile sheets. Two profile sheets show the scores for the school's psychosocial climate, one based on student reports about the school and one based on teacher reports about the school. Two other profile sheets describe the school's population, one based on student reports about themselves and one based on teacher reports about themselves. Schools using only the student or only the teacher assessments will, of course, have only two profile sheets.

Profile Layout

Each profile sheet is designed so that high scores, indicative of positive school climates, are plotted on the right side of the page. Low scores, indicating possible problem areas, are plotted near the left side of the sheet. An average school, one that is neither particularly high nor particularly low, would have most of its scores plotted in the central region of the profile sheet. Each set of profiles comes with a brief interpretive guide that explains the results in nontechnical terms.

Administering the ESB

Conducting a school climate assessment using the ESB is a straightforward matter. All that is needed is a supply of test booklets and answer sheets, students and teachers equipped with No. 2 lead pencils (with erasers), and a plan to administer the inventories. A detailed *Survey Coordinator's Manual* provides guidance on planning for the climate assessment. This guidance should be followed carefully. Because almost all schools participate in achievement and interest testing programs, most schools have had lots of practice in the kinds of preparation required to administer the inventories.

The best time to administer the ESB is in late April or early May. The normative data were collected in surveys conducted at that time of year, and everyone is accustomed to the school by the Spring. While the ESB can be administered any time during the school year, administrations very early in the school year and near holidays should be avoided. Surveys should be administered Tuesday, Wednesday, or Thursday because attendance is usually highest in the middle of the week.

Student Administration

The student inventories can most efficiently be administered in groups of 25 to 35 persons, although some schools use massed administration in cafeterias or multipurpose rooms. In general, it is a good idea to have an adult (a teacher, administrator, or parent volunteer) for every 45 students to help keep the administration orderly, to answer students' questions, and to make sure students are filling out the answer sheets according to the instructions.

The student inventory can be completed by nearly all students in a 50-minute hour. Older students of high reading ability can complete it in about 25 minutes, younger students and students with poorer ability may take 50 minutes or more to finish the inventory. For sixth or seventh grade students, scheduling more than one class period for completion may be useful, especially if the students are below grade norms in reading. When the inventory is administered in a 50-minute hour, it is recommended that additional seatwork be on hand for those students who finish early so that they do not disrupt students still working on the inventory.

Very young students may have short attention spans, and two administration sessions may be helpful. It is best to exclude from administration students below grade 6 and students diagnosed as educably mentally retarded; the inventory is recommended for students in grades 6 through 12.

Because the reading levels of students sometimes differ considerably from school to school or from class to class within schools, survey coordinators should discuss administration details with knowledgeable teachers and arrange plans accordingly.

Boxes should be made available in which students deposit completed answer sheets. The unidentified answer sheets returned in ballot-box like fashion help assure the confidentiality of each student's responses.

Teacher Administration

The teacher inventories should be administered in staff meetings if possible. Like everyone else, teachers sometimes procrastinate. Group administration in a staff meeting accelerates the completion of the survey, provides an opportunity to explain the purposes and uses of the climate assessment, and gives teachers an opportunity to ask questions and become involved. In staff meetings, teachers can deposit their completed answer sheets in a large box and can see that individual responses can not be identified. Or, one teacher can be elected to shuffle the answer sheets before they are deposited in the box. Detailed advice on planning for and administering teacher surveys is provided in the *Survey Coordinator's Manual* available from the publisher.

Who Should be Included In the Climate Survey?

Most schools should administer the ESB to all students and all teachers in the school. There are three reasons for this. First, administering the climate assessment materials to everyone eliminates the need to worry about how the sample for the survey is drawn. If everyone is included, it is certain that the sample represents the school. In contrast, if only certain classes of students complete surveys, the results could be biased in ways that may be difficult to interpret. Second, it is usually easier for schools to administer surveys to all students and all teachers than it is to arrange to have carefully selected students drawn from classes and brought to a central location for administration of the surveys. Third, if everyone participates in the school climate assessment, everyone will have a better idea of what it entails and have more of a stake in the outcome. People like to feel that their views are being attended to, and a climate assessment is a mechanism for summarizing the views of students and teachers and putting them into useful form.

Occasionally, very large schools may want to administer surveys only to a sample of students rather than to all students in the school. The careful selection of this sample is important in producing dependable results — results that represent the views of all students. Many schools have successfully conducted school climate assessments using samples of students. Most schools planning to administer inventories to a sample of students should seek the advice of an expert in sampling. Experts can easily be found in most university psychology, sociology, or statistics departments as well as in some education departments. Faculty members in these departments are often willing and even eager to contribute some time in helping to draw samples as a public service. When complex sample designs are used, expert statistical consultation on standard errors may be required.

Scoring the Inventory

Completed answer sheets are sent to a scoring service for optical scanning and the preparation of school profiles. The scoring service works under license from the publisher, so users can be sure that the climate assessment materials are scored according to specifications. Special scoring services, such as the comparison of results for various subgroups, statistical comparisons among schools, or statistics on the responses to specific items in the inventories, are available through special arrangement. Users should contact Gottfredson Associates, Inc. for more information about these services and their costs.

Chapter 3
Measuring Individuals and Organizations

This chapter provides some background information for using and interpreting measures of school climate. It will help readers understand the measurement of organizations, and it provides some explanations of the terms behavioral scientists use when measuring individuals or organizations.

Measuring Individuals versus Measuring Organizations

The Effective School Battery (ESB) measures organizational climate and the characteristics of the students and teachers who study and work in the school.

The characteristics of the people in the school as well as the school's climate are measured separately for an important reason. Everyone has experienced differences in the psychosocial climates of different organizations, and can easily appreciate that organizations differ in the environments that they provide. Yet different individuals often have different views of the characteristics of the same organization. One person may view rules or regulations as fair and necessary, and another person may view the same rules as arbitrary and unneeded. Therefore, in assessing an organization's climate, it is important to average across many different reports to secure dependable assessments of the school. On average, the reports of many individuals are expected to yield a balanced and general description of psychosocial climate. These differences are, however, the very reason it is important to measure individuals. For some purposes it is also useful to describe the characteristics of the people who work and study in a school. For example, the average job satisfaction of a school's teachers, the degree of alienation of its students, and the effort the typical student expends on school work are student and teacher characteristics that are related to important organizational outcomes.

The measures in the ESB are rooted in a program of research on school environments conducted over a number of years at Johns Hopkins University. The development of the ESB was guided in part by an examination of instruments used in the National Institute of Education's (NIE's, 1978) Safe School Study (G. Gottfredson & D. Gottfredson, 1985), instruments suggested by Fox and associates (1974), the School Initiative Evaluation questionnaires (Grant, Grant, Daniels, Neto, & Yamasaki, 1979), and a number of other instruments used in major social surveys or for individual assessment in recent years. Decisions about useful measures were based on a review of the goals and objectives of educational improvement projects evaluated by Johns Hopkins scientists, delinquency theory (Gold, 1978; Greenberg, 1977; Hirschi, 1969; Lemert, 1972), research on organizational development and school improvement (Berman & McLaughlin, 1976; French & Bell, 1978), and G. Gottfredson's (1983) account of some implications of delinquency theory and strategies for school improvement. Discussions with school personnel and community groups — using the Program Development Evaluation (G. Gottfredson, 1984) method — about the goals and objectives of their school improvement programs contributed greatly to the formulation of the measurement needs.

Some Essential Psychometric Concepts

To use the ESB in an informed manner, it is important to understand several ideas: (a) the relative nature of psychosocial measurement, (b) reliability, and (c) construct validity. The following paragraphs review these ideas. (For more thorough discussions of these concepts see Lyman, 1978, or Thorndike, 1971).

Relative Measurement

There are few absolute measures in education. In other words, simple counts of "units" of achievement or interpersonal competency or fairness or delinquency are impossible to obtain. Instead, their levels are usually expressed in relative terms. For example, achievement test results are often presented in terms of percentile rank or standard score form. Percentiles and standard scores describe the standing of an individual (or organization) relative to a norm group. For example, a percentile rank of 76 on an achievement test would mean that out of 100 individuals representative of the population on which the test's norms are based, 76 persons would have a score lower than this one. The ESB interpretive summaries use percentile ranks for schools to present results. For example, a percentile rank of 36 on the staff morale scale means that out of 100 schools representative of the

population on which the inventory's norms are based, 36 schools would have a score lower than this one.

The ESB school profiles plot T-scores. T-scores have a mean of 50 for schools in the norm group of schools, with a standard deviation of 10. In other words, an average school will have a T-score of 50. A school with a T-score of 65 is one and a half standard deviations above the average score for schools. T-scores are used rather than percentiles in graphical displays of profiles because many users mistakenly interpret differences in percentiles near the center of the distribution as being as meaningful as differences in percentiles near the left or right tails of a distribution.

In interpreting percentile scores or T-scores for schools it is important to remember that they express scores relative to other scores in the norm group of schools. Different samples of schools will differ somewhat in their mean (average) scores and in the dispersion (spread) of their scores. Therefore a school that is, for example, at the 65^{th} percentile relative to the ESB norm group could be at the 30^{th} percentile relative to another norm group. There is no such thing as a magically "correct" or even "most appropriate" norm group.

The psychometric use of the word "norms" has little or nothing to do with some everyday language uses of the word. In everyday language the term "norm" is sometimes used to mean an ideal or required standard. It is quite possible for a school to have students who show an "average" degree of satisfaction with school, but who are rather uncomfortable — or who are average in reading achievement according to large city norms, but who do not read well at all. In interpreting any particular results, readers should probably consider both their own "ideal" norms and the "statistical" norms presented in the profiles.

In subsequent sections of the manual, use is made of means and standard deviations to present results. For instance, means and standard deviations are presented later in the manual for measures of student and teacher characteristics to show how students and teachers of different ethnic groups compare. A *mean* is an arithmetic average, and a *standard deviation* is a unit of dispersion or the degree to which scores are bunched together or spread out. This way of expressing scores is especially useful when it turns out that scores have the familiar bell-shaped distribution; that is, when lots of schools have scores near the middle of the distribution, and the relative frequency of scores trails off symmetrically for higher and lower scores. (Roughly, this is what is meant by a "normal" distribution.) School climate scores generally do resemble this bell-shaped distribution.

Reliability

Chance, sloppiness, ambiguity, temporal instability, and heterogeneity of meaning or interpretation can influence any measure. Measurements of the distance between Baltimore and New York made by the odometers in a number of different cars would tend to agree pretty well, but not perfectly. They would have high, but not perfect, reliability. Reliability is a technical term used to describe the relative contributions of measurement error and "true" score variability to a scale or other measure. The smaller the contribution of error or noise, the higher the reliability. Because there are many ways of defining error, there are many ways of estimating reliability (Lyman, 1978; Stanley, 1971).

The reliability coefficients reported in this manual are of two kinds. One kind is based on the analysis of items administered on a single occasion and therefore excludes temporal instability from the definition of error. They can be interpreted as an index of how well the scales composed of these items measure whatever they measure at a given point in time. This kind of reliability coefficient is called a "homogeneity" coefficient; it is estimated using a coefficient known as "alpha." The second kind is based on the stability of scores over time. It is estimated by correlating scores obtained by individuals or schools in the Spring of 1981 with scores for the same individuals or schools obtained in the Spring of 1982 or in 1983. This kind of reliability estimate is called a "retest" reliability; it is a measure of the stability over time of a score.

Knowledge of the reliability of a test or other index is important because a low homogeneity coefficient means that the device does not measure anything well. A high homogeneity coefficient means that the device measures *something* reasonably well. (What that something is, is what construct validity is all about.) Homogeneity coefficients can range from 0 to 1.0. A reliability of 1.0 is high, meaning that the score contains no error. A high retest reliability means that a stable characteristic of a person or organization is being measured. High retest reliabilities may mean that (a) the characteristic is resistant to change, (b) the environment is preventing the individual or organization from changing, or (c) nothing has been done to change the characteristic.

Over the years practitioners have developed rules of thumb for acceptable levels of reliability for

different purposes. In general, it is not sound practice to use tests with reliabilities below .7 or .8 for individual diagnosis, personnel decisions, and so forth. This is because one would want to be certain that a score is reasonably error-free when making important decisions about individuals. When interpretations of patterns or profiles are to be made, it is especially important that reliability be this high, or higher.

For evaluation purposes, and for describing groups, lower levels of reliability of measurement at the individual level are acceptable and are sometimes to be preferred, because of three related considerations. First, because the scores of many individuals are usually averaged in an evaluation, dependable estimates of group means can be obtained even with rather unreliable individual measures (see Stanley, 1971). Second, the longer the scale (i.e., the more items), the more reliable it is, other things being equal, but it is often difficult, time consuming, or costly to administer long scales. As an alternative, using short scales with many persons gains good estimates of group means. Third, in an assessment of school climate it is necessary to measure many things. This is because schools have many goals and objectives, and because it is always wise to search for unanticipated strengths and weaknesses of schools when conducting an assessment. But administering many highly reliable (i.e., long) scales is prohibitive. Fortunately, a large test group again comes to the rescue. Using short scales with many people solves the problem and yields satisfactory estimates of school characteristics.

Some schools may wish to use the scales of the ESB not only to assess overall school climate (for which they are well suited), but also to evaluate educational programs within the school. For such evaluations, the reliabilities of the measures of individual characteristics are important in a different way. As a rule of thumb, scales with reliabilities as low as .40 or .50 (or even lower) are adequate for use in an educational evaluation, *provided* that the program being evaluated uses *randomization* as a selection device, or that any selection is absolutely independent of (i.e., unrelated to) the measures of the goals or objectives of the program. In such an evaluation, it is not necessary to attempt to adjust for preexisting or spurious group differences on outcomes. When it is necessary to make such adjustments by using statistical "controls," reliabilities for the control variables must be as high as possible. The rule of .50 is too lax in this case because when the "control" variables are unreliable, they do an inadequate job of correcting for spurious differences between groups. Therefore, to enable a sound evaluation, a project which does not randomize or employ another procedure to ensure the equivalence of groups should use more reliable (i.e., longer) scales encompassing measures of all relevant characteristics in which the treatment and comparison groups may differ. In such cases the assistance of a specialist in evaluation should be sought.

Another instrument — *What About You* — containing longer, more reliable scales measuring some of the student characteristics measured by the ESB is available. (Gottfredson & Gottfredson, 1992.)

Validity

Validity refers to the meaning and interpretation of an index or score. The exploration of meaning is a never-ending process, because it is so closely linked with theory. Theory involves constructs or ideas about the causes or nature of phenomena. Often, measurement has meaning only in the context of some theory.

For example, some educators have a theory that a general ability called intelligence underlies much human performance, or at least scholastic achievement. The measurement of intelligence using a paper and pencil verbal ability test may make sense in terms of this theory. Because the theory predicts that this test will correlate with school grades, evidence about the validity of a test for measuring the construct of intelligence can come from an examination of the empirical relation between test scores and school grades. The same evidence provides information about the utility of the theory. Theories and measures are thus validated in a common process. We speak of a test as validated when empirical evidence has in general shown the test results to follow the predictions of a theory that has been useful.

In addition, when there is agreement about what a construct means, some evidence about validity can come from an examination of the item content of a test. For example, most of us would probably agree that a test to see how many bricks a person can load on a truck in an hour is a poor test of verbal ability, and that a list of multiple-choice vocabulary items would provide a more valid measure of that construct. (Similarly, the vocabulary test would be a poor test of endurance.) Therefore, deliberately including items to measure a given construct in itself can provide some limited degree of confidence in a scale's construct validity.

The evidence is strengthened if the scale shows expected patterns of correlations with other scales. It is especially strengthened if applicable experimental manipulations influence scores in predicted ways. Other evidence of validity can come from an examination of differences in scores on the scale among groups known or believed to differ in the characteristic being measured. For widely used instruments, these kinds of evidence accumulate over time. Eventually, a basis for judgment about a scale's construct validity emerges — although different judges sometimes disagree.

Subsequent chapters describe the origins, development, and some psychometric properties of the ESB. These sections are intended to provide information about reliability and validity, and to describe the normative interpretation of these assessments.

Chapter 4
Measures of Student Characteristics

Four sets of measures of individual students have been developed: social background, peer relations, attitudes and psychosocial development, and self-reported behavior. The measures were chosen through discussions with school personnel implementing educational or school improvement programs, who indicated the student characteristics of concern to their programs and what they hoped to accomplish. These measures were also chosen to enable a demographic description of schools, and to measure student characteristics that research has shown to be related to important educational and social outcomes. Because most schools are concerned with the quality of school life and with maintaining a safe, orderly atmosphere in their schools, measures were developed to assess student characteristics that research implies are related to student conduct. All measures are intended only for characterizing groups of students in educational evaluations and for describing the population of students in schools. They are not intended for individual assessment.

To make school profiles of averaged student characteristics easy to interpret, each scale — except for the invalidity scale — is scored so that a high score is a desirable outcome. For instance, alienation is incorporated in a scale called *Social Integration*, where a high score implies the desirable outcome — integration with the social order of the school. A low score implies alienation.

Social Background

Schools differ markedly in the socioeconomic background of their students. Knowledge of the educational background of a school's students helps to put other information in perspective. In addition, a measure of family background is useful in educational evaluations: It provides a statistical control when the design calls for statistical adjustments, or when stronger evaluation designs fall apart. Accordingly, the following scales are included in the ESB.

Parental Education. This two-item scale is based on decades of research showing parental education to be a powerful antecedent of schooling outcomes, especially of persistence in education (Sewell, Haller, & Portes, 1969). The two items ask how much education a student's father and mother completed. This measure may be taken as a sign of family socioeconomic status. Parental education is known to he a moderately good predictor of schooling outcomes such as persistence and grades (Bachman, Johnson, & O'Malley, 1978; Jencks, 1979).

Peer Relations

A measure of student relations with peers was developed because of (a) powerful statistical associations between delinquent behavior and delinquent peer influence, and (b) the common practitioner observation that student association with delinquent gangs or other youths who are frequently in trouble is a major source of student misconduct.

Positive Peer Associations. This scale measures a construct central to the explanations of delinquency and nonattendance articulated by many practitioners, and it is rooted in earlier research (summarized by Empey, 1978) that shows delinquent peer associations to be powerful predictors of delinquent involvement. In addition, it incorporates items related to dropout, similar to those used in earlier studies of persistence in schooling (Bachman et al., 1978). It is an attempt to engineer a long, powerful, and broad-based measure of positive and negative peer influence. This nine-item scale (on which a high score reflects positive peer associations and a low score reflects association with delinquent or school-rejecting peers) contains items asking whether the student's best friend is interested in school, thinks getting good grades is important, thinks school is a pain, or has been involved in delinquent activities.

Attitudes and Psychosocial Development

The promotion of positive psychosocial development is a major goal of most school systems. In this area, there was considerable prior work to build on in choosing measures.

Educational Expectation. An item asked students how far in school they expected to go. This item is intended to provide an indicator of commitment to a conventional goal, and it is known to predict subsequent education attainment (D. Gottfredson 1982; Jencks, 1977). Educational expectations generally have substantial negative correlations with delinquent behavior (D. Gottfredson, 1981).

Social Integration. A key index of social organization is social integration. The degree to which people in an environment are integrated with or alienated from the social order in a school is assumed to be related to the comfort people feel in the environment, the ability of the environment to control the behavior of its inhabitants, and to psychological health. The six-item Social Integration scale is related to Srole's (1956) Anomia Scale and to the McClosky and Scharr (1965) Anomy Scale, but the wording of items has more school-related content and sounds a little less bizarre. Alienation items used in the School Initiative Evaluation (Grant et al., 1979) and in other previous studies were also modified for use here. This scale is scored so that a high score indicates social integration and a low score indicates alienation. Items include “These days I get the feeling that I'm just not a part of things”; and “I feel no one really cares much about what happens to me.”

Attachment to School. This is a central construct for many school improvement projects with an objective of developing positive student attitudes toward school. The construct is also central to a social control theory of delinquency (Hirschi, 1969) that views attachment to school as a major social bond restraining individuals from participation in delinquent behavior. Consequently, a relatively long and broad-based measure of attachment to school was constructed. This 10-item scale asks students if they like the school, if they like the classes, how important getting good grades is, and so forth.

Belief In Rules. The expectation that individuals differ in the extent to which they believe in the moral validity of conventional social rules, and that the degree of belief influences behavior, is widely shared. A common goal of peer-group-based interventions in schools is to strengthen belief by using peer pressure. The item content of Gough's (1964) Socialization scale (which was developed through empirical efforts to discriminate between adult offenders and non-offenders) lends support to the popular notion that belief in rules is a restraint against misconduct. In addition, belief is a central construct in social control theory, which postulates that people differ in the degree to which they have internalized rules, and that they therefore are constrained from involvement in delinquent behavior to different degrees. Much empirical evidence supports this idea (e.g., D. Gottfredson, 1981; Hirschi, 1969).

Consequently, a short scale was built from well-established items that had been used in other research, and whose characteristics were known. The six-item scale contains items such as"It is all right to get around the law if you can"; "Taking things from stores doesn't hurt anyone"; and "People who leave things around deserve it if their things get taken."

Interpersonal Competency. This five-item scale contains four items from Holland and Baird's (1968) Interpersonal Competency Scale. That scale consistently has moderate reliability and correlates positively with other measures of psychological health or adjustment, and negatively, with measures of alienation (Holland, Gottfredson, & Nafziger, 1975). A fifth item was written to give the scale more school-related content.

Involvement. This scale (not to be confused with environmental measures of student influence or involvement in decision-making) is composed of 12 items (most of which were adapted from the recent National Longitudinal Study questionnaire) asking about a student's participation in a wide variety of in-school activities. It is included to provide an assessment of the degree of involvement of students in constructive extracurricular activities.

Positive Self-Concept. A number of self-esteem scales with well-researched properties are available. (Robinson and Shaver, 1973, review more than 30 measures.) To create a short scale, items previously used by Rosenberg (1965) and an item similar to one used by Coopersmith (1967) were subjected to analysis along with another set of items constructed to capture aspects of self-concept specific to schooling and delinquency. This scale is also based partly in the labeling perspective (Lemmert, 1972), which implies that if people are treated as slow learners or delinquents, they will come to incorporate aspects of those social definitions into their own self-concepts. Positive self-concept, therefore, is an important intermediary outcome according to labeling theory. According to this perspective, educational environments that systematically treat slow learners or misbehaving students in derogating ways will generate negative self-concepts. In contrast, educational programs that avoid derogating students would increase scores on the positive self-concept scale.

Item analysis did not justify treating self-esteem as a separate scale from these labeling “outcomes,” because items are about equally correlated across the two sets. Typical items in this 12-item scale include, "My teachers think I am a slow learner"; "Sometimes I think I am no good at all"; "I am the kind of person who will always be able to make it if I try"; and "I do not mind stealing from someone — that is just the

kind of person I am."

Self-Reported Behavior

Ultimately, it is the behavior of the young people that is of most concern. The measurement of behavior is therefore essential to the assessment of school climates and to educational evaluation. Some information about the behavior of students is available in archival records that are maintained in various ways by schools. Those archival records are, however subject to many limitations: They vary in completeness, accuracy, and availability. But useful records on attendance, school grades, and test scores are available in most schools. Measures of other student behaviors are usually not available. One such behavior of obvious importance, effort expended on school work, is generally not measurable through any school records. Accordingly, a self-report measure of this behavior was developed.

School Effort. That students who earn low grades in school tend to drop out of school and to engage in delinquent behavior more than others are two of the best documented and consistent findings in the literature (Bachman et al., 1978). Social class and ability are modestly associated with these same outcomes but do not completely account for these associations. Therefore, it seems likely that these outcomes are determined at least in part by grades — the major, if infrequently applied, reward system of traditional schooling. Grades in school are not determined solely by ability and social class, of course. Industrial psychology's instrumentality theory (Porter & Lawler, 1968) suggests a mechanism whereby effort is expended if valued rewards are perceived as attainable, and in which effort is one of the determinants of both performance and rewards. Therefore, *effort* is an important variable that should be assessed in school improvement programs designed to prevent delinquency or foster persistence in schooling.

Because no existing questionnaire measures of this construct could be found, one was developed. This five-item scale includes items such as "Compared to other students, how hard do you work in school"; "I turn my homework in on time"; and "I don't bother with homework or class assignments."

Measures of School Experiences

Schools often make use only of a limited range of responses to student behavior (McPartland & McDill, 1977), and making effective use of rewards beyond traditional classroom grades may be an important method of improving school discipline (G. Gottfredson & D. Gottfredson, 1985). Furthermore, the rewards and punishments that students experience in school are likely determinants of the effort expended on school work and therefore of school performance (compare Porter & Lawler, 1968). To assess this important aspect of the school experience, two scales were developed to measure students' rewarding and punishing experiences in school.

Avoidance of Punishment. This four-item scale is an index of the negative sanctions an individual student experiences. A low score indicates that a student is often punished in a variety of ways, and a high score indicates that the student is seldom punished. It asks whether the student was required to stay after school, given an extra assignment, or had his or her grade lowered as a punishment.

School Rewards. This six-item scale is an index of the positive sanctions an individual student experiences. It includes reports of incidents in which the teacher complimented the student's work, the student was given a prize or award, or the student won an award for his or her class.

Invalidity

There is always some concern that students may not faithfully complete their questionnaires, that they may fool around or give silly answers. As a check on this, an index is included in the ESB to detect unusual or nonsensical responses. A five-item Invalidity index is composed of items that a careful respondent would answer in only one way. It is keyed so that a rare response earns a point. This index is used as a check on the results and as a quality control mechanism. Invalidity indicators are not intended to measure a reliable characteristic of individuals and hence usually have low reliabilities.

Item Analyses

Scales were constructed by subjecting *a priori* scales to internal consistency item analysis. Data for initial item analyses came from the responses of students in 58 schools who completed questionnaires in the Spring of 1981. These included urban schools with large minority populations and suburban schools; one school was located in a rural Indian reservation, one in a moderately sized community in the Virgin Islands, and three in Puerto Rico.

Item analyses were conducted in a random one-half sample (called the 'construction sample'), and were performed separately for sex-ethnic group

combinations (male blacks, female blacks, male whites, female whites, etc.). These separate item analyses were intended to ensure homogeneity of meaning of the items for each group. Items that did not work well for any group were carefully scrutinized and were usually deleted from the scales. The hold-out sample was used to obtain unbiased estimates of the homogeneity of the scales in a sample other than the sample used to construct the scales. The results of these initial item analyses, which are presented in detail in a technical report (Gottfredson, Ogawa, Rickert, & Gottfredson, 1982) suggested that most scales worked well, but that the social integration scale needed improvement. New items were written to measure social integration and were subjected to item analyses using data collected in the Spring of 1982. This revision did result in an improvement in the scale.

Reliability

The Single Occasion Reliability of Student Characteristics

The scales measuring student characteristics were developed using students from a sample of schools which participated in the School Action Effectiveness Study (G. Gottfredson, 1982; G. Gottfredson, D. Gottfredson, & Cook, 1983). These schools were implementing school improvement or alternative education programs aimed at reducing the risk of delinquent behavior sponsored by the U.S. Office of Juvenile Justice and Delinquency Prevention, or they were similar schools which participated as "control" institutions. Samples of students from these schools were used to estimate the homogeneity of the scales measuring student characteristics.[1] Participating schools were located primarily in large urban areas and most schools were predominantly minority. Tables 1 and 2 describe the schools in the sample used to calculate the homogeneity coefficients reported in subsequent tables.

Homogeneity coefficients (alpha) for six ethnic groups are shown in Table 3. These include the usual five groups identified in social surveys, but break the Spanish-speaking/Spanish-surnamed group into those who reside in Puerto Rico and those who reside in the mainland U.S. (The Puerto Rican sample completed assessment instruments in Spanish,[2] and results are presented separately because of potential cultural differences between the Puerto Rican and mainland samples.)

Table 4 shows homogeneity coefficients separately for males and females and for the total sample. This table also shows the number of items in each scale.

The reliability coefficients presented in Tables 3 and 4 generally support the usefulness of each scale with both sexes and all ethnic groups. In each case the reliabilities are adequate bases for the measurement of the average characteristics of a school's students, and for aggregate use in the evaluation of educational programs.

Stability of Student Characteristics Over Time

One-year retest reliabilities of each of the measures of student characteristics are presented in Table 5. These stability coefficients provide information about the degree to which young people tend to retain their relative standing on these measures from year to year. These retest reliabilities were calculated using a random half of the students In the same schools described in Table 1 who completed inventories in both 1981 and 1982. A one-year interval appears to be a sufficient period of time to determine the extent to which these scales measure relatively stable characteristics of the students. Furthermore, a one-year interval corresponds with the typical use of climate assessments in evaluating school improvement efforts or in monitoring school climates for management purposes.

[1]The following account is based on analyses of student responses in surveys conducted in the Spring of 1982. A similar, but more detailed set of analyses using data collected in 1981 (providing detailed reliabilities separately for the sex-ethnic group combinations) are provided by Gottfredson et al. (1982). Those more detailed analyses are based on scales constructed using slightly different scoring procedures (summed standard scores rather than summed 0-1 scores) and some scales were improved by adding better items in the analyses reported here.

[2]To prepare the Spanish-language instrument each English-language item was translated into Spanish, making an attempt to avoid regionally-specific word forms and to use the simplest forms of expression possible. The resulting Spanish-language material was independently re-translated by a different person into English. A third person listened to a tape recording of the re-translation and compared it to the original English version. Any discrepancies in meaning or sense between the re-translation and the original were examined, and new translations were obtained as necessary until the re-translated meanings were judged the same. The advice of several native Spanish speakers was used in an attempt to ensure that the Spanish-language form was understandable to Chicanos in the U.S. Southwest, to students in Puerto Rico, and to persons of Puerto Rican origin residing in the Northeast and Northcentral U.S. Mainland.

TABLE 1
Locations of 1982 Student Surveys

Location	*n*	*Type*
Plymouth	171	Middle
	163	Middle
	427	High
	264	Alt.
Kalamazoo	565	Junior
	235	Junior
Charleston	365	High
	478	High
	428	High
	370	Middle
	336	Middle
	364	Middle
	325	Middle
	277	High
	351	Middle
Los Angeles	60	Alt.
	56	Misc.
	405	High
	351	Junior
New York	333	Junior
	66	6th gd.
	143	6th gd.
	131	6th gd.
	260	Junior
	291	Junior
	87	6th gd.
	277	Junior
	154	Inter.
	326	Inter.
	340	Inter.
	212	Inter.
	34	Inter.
	137	Alt.
Christianstad	268	Junior
Heyward	78	Alt.
	26	Misc.

Location	*n*	*Type*
Chicago	307	High
	455	High
	427	High
	287	6th gd.
	110	6th gd.
	149	6th gd.
	77	6th gd.
	94	6th gd.
	110	6th gd.
	169	6th gd.
	177	6th gd.
	171	High
	145	High
	138	6th gd.
	192	6th gd.
	250	6th gd.
	124	6th gd.
St. Paul	231	Junior
	257	Junior
	274	High
	197	High
Ponce	384	Junior
	237	Junior
	526	Senior
	122	Junior
Vineland	192	6th gd.
Pennsauken	330	Junior
Pleasantville	316	Middle
Buena	379	Middle
Houston	61	Alt.
	16	Misc.
Miami	69	Alt.
	20	Misc.

TABLE 2
Ethnic Composition and Age of the 1982 Sample (Percent)

Ethnicity [*n* = 14108]	
Native American	2.0
Asian American	1.1
Spanish American	29.1
Black	43.7
White	21.8
Other	2.3

Age [*n* =15027]	
10 years or less	1.6
11 years	6.8
12 years	16.6
13 years	23.9
14 years	18.4
15 years	11.8
16 years	9.4
17 years	7.2
18 years or older	4.3

TABLE 3

Reliability Coefficients (Alpha) for Individual-Level Student Scales by Ethnic Self-Identification

Scale	Whites	Blacks	Puerto Ricans	Mainland Latinos	Native Americans	Asian Americans
Parental education	68	63	57	73	51	84
Positive peer associations	70	63	55	69	61	59
Social integration	60	49	42	53	46	48
Attachment to school	82	70	66	72	79	70
Belief in conventional rules	62	55	46	47	62	53
Interpersonal competency	56	52	44	35	49	46
Involvement	67	60	61	63	70	67
Positive self-concept	63	56	52	56	55	65
School effort	62	56	51	58	60	65
Avoidance of punishment	48	51	17	57	54	52
School rewards	62	64	56	53	63	50
Invalidity	41	46	31	36	55	52

Note. Decimals omitted.

TABLE 4

Reliability Coefficients (Alpha) for Individual-Level Student Scales by Gender and Number of Items in Each Scale

Scale	Male	Female	Total sample	Number of items
Parental education	76	72	78	2
Positive peer associations	63	67	65	9
Social integration	60	44	51	6
Attachment to school	76	75	76	10
Belief in conventional rules	52	54	53	6
Interpersonal competency	43	47	43	5
Involvement	60	62	62	12
Positive self-concept	58	60	61	12
School effort	62	56	59	5
Avoidance of punishment	54	53	54	4
School rewards	63	58	56	4
Invalidity	44	45	44	5

Note. Decimals omitted.

TABLE 5

One- Year Retest Reliabilities of Student Characteristics

	Males		Females	
Student characteristic	r_{xx}	*n*	r_{xx}	*n*
Parental education	.70	546	.72	626
Positive peer associations	.44	849	.39	1007
Social integration [a]	.33	674	.39	870
Attachment to school	.53	791	.46	975
Belief in conventional rules	.38	662	.40	888
Interpersonal competency	.32	602	.32	810
Involvement	.37	747	.50	888
Positive self-concept	.45	576	.50	798
Educational expectation	.48	959	.41	1081
School effort	.46	851	.40	966
Avoidance of punishment	.27	805	.32	979
School rewards	.33	804	.32	982
Invalidity	.32	677	.31	896

Note. Reliabilities calculated on a random half sample of students who completed questionnaires in both 1981 and 1982.

[a] An improved Social Integration scale was available in 1982. The correlation reported is the correlation between this improved measure and a less reliable measure used in 1981.

The retest reliabilities are, of course, lower than the one occasion estimates of reliabilities because they treat instability over time as an additional source of error. Parental education is, as expected, very stable over time; most parents have completed as much formal education as they will complete. The other student characteristics are moderately stable, but the retest reliabilities are not so high that they suggest that these scales measure immutable characteristics of the students.

Validity

The ESB is a new instrument, and evidence useful in evaluating its validity is still accumulating. (See Appendix 5 for citations to research reported after this manual was prepared.) One way to assess validity is to examine the item content of each measure, and readers can form impressions about content validity by examining the items included in each measure using the key shown in Appendix 1. Another way of assessing validity entails the examination of previous research using closely related measures. The account of the measures presented earlier in this chapter provides references to related research useful in making this kind of assessment. A third way of assessing validity is the direct examination of the measures at work: an examination of the correlates of the measures and of the effects of interventions designed to bring about changes in the characteristics these scales are intended to measure. Some empirical evidence of this third kind follows.

The Characteristics of Different Groups

In the next section, the correlations among the ESB measures, and the correlations of ESB measures with some external criteria, are presented for several groups. In this section, the characteristics of these groups are described to provide a context to aid in interpreting the correlational evidence and to provide a picture of the ways males, females, blacks, and whites score on the ESB measures. The evidence summarized in this and the next section is based on data collected in surveys in 48 schools conducted in the Spring of 1983. The schools were located in Pasadena, CA; Chicago, IL; Kalamazoo, MI; South Bronx, NY; Playa de Ponce, PR; Charleston, SC; St. Croix, VI; Plymouth, MI; several cities in New Jersey; and St. Paul, MN.

Mean scores on ESB measures of individual characteristics for males and females are presented in Tables 6 and 7, respectively. These tables also show mean scores for several criterion variables to be discussed shortly. The ESB measures are all scored in one of two ways. First, the scales measuring student personal characteristics are scored so that the numerical value is the proportion of items in the scale answered in the "high" direction. For example, the mean score of .65 on the Attachment to School scale for males means that the average male student answered 65% of the items in a way that indicated high attachment to school. Second, the single-item Educational Expectation index and the Parental Education scale are scored in a way that enables a verbal interpretation. The Parental Education scale ranges from 0 to 4, where 0 means eighth-grade education or less, 1 means some high school, 2 means finished high school, 3 means some education beyond high school, and 4 means finished college. Thus the mean for males of 2.01 on this scale means that the average male student's parents finished high school. This is an average of the education of both father and mother. The Educational Expectation index ranges from 0 to 5, where 0 means that the student does not expect to complete high school, 1 means the student expects to graduate from high school, 2 means the student expects to complete some vocational school after high school, 3 means that less than two years of college is expected, 4 means completion of a two-year college degree is expected, and 5 means the student expects to complete a four-year college degree program. The mean score of 3.08 for males indicates that the average male student expects to complete less than two years of college work.

Some expected differences between the average scores of males and females reported in Tables 6 and 7 lend some support to the construct validity of the measures. Girls score higher (about a third of a standard deviation higher) than boys on Positive Peer Association, implying that boys generally have more friends who dislike school, cut school, get into trouble, etc. Girls have somewhat higher Educational Expectations than boys, in accordance with the common observation that girls usually do complete more formal education than do boys. Girls also score higher on Social Integration, Attachment to School, School Effort, and Avoidance of Punishment than do boys (about a third of a standard deviation higher), which is consistent with expectations (Holland, 1984) that girls, who more often have social interests and competencies than do boys, should find schools to be more congenial environments. Girls score higher (about half a standard deviation higher) than boys on Belief in Conventional Rules, which is consistent with other evidence (Maccoby & Jacklin, 1974) that girls are generally more rule abiding and well socialized than boys.

Similar tables showing the means for black male and female and white male and female characteristics are shown in Tables 8, 9, 10, and 11, respectively. A similar pattern of sex differences is evident for both blacks and whites. As expected, whites report higher levels of Parental Education than do blacks. This reflects the differences in family background associated with historical and current differences in educational opportunity for the two groups in American society.

Detailed tables showing means and standard deviations on an earlier version of the ESB scales for white, black, Hispanic, Asian-American, and native American males and females may be found in a technical report (G. Gottfredson et al., 1982).

Correlations Among the ESB Measures

The correlations among the ESB scales indexes measuring individual characteristics are important for two reasons: (a) The scales should be reasonably independent of each other — redundant measures of essentially the same characteristics by scales with different names should be avoided; and (b) the correlations among the scales provide some insight into the meanings or construct validity of the measures. Correlations among the ESB measures are shown for males (above the diagonal) and females (below the diagonal) in Table 12. These correlations are based on the same samples described in Tables 6 and 7.

For both males and females, the correlations among the ESB measures are all substantially lower than the reliabilities of the measures, implying that each scale does measure a relatively independent personal characteristic. And, the pattern of correlations for males resembles the pattern of correlations for females, suggesting that the scales work in about the same way for both sexes. The correlations shown in Table 12 also generally support the construct validity of the measures; a detailed review of the table is deferred until a subsequent section where information presented in other tables is considered in concert with the Table 12 evidence.

Correlations of the ESB Measures with External Criteria

The correlations of the ESB measures with some external self-report criteria are presented for males and females in Table 13. The same

TABLE 6
Male Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	6133	2.01	1.16
Positive peer associations	7188	0.75	0.22
Educational expectation	7530	3.08	1.15
Social integration	5773	0.63	0.26
Attachment to school	6614	0.65	0.26
Belief in conventional rules	5857	0.66	0.25
Interpersonal competency	5815	0.76	0.24
Involvement	7024	0.19	0.17
Positive self-concept	5791	0.72	0.18
School effort	7355	0.55	0.30
Avoidance of punishment	6785	0.75	0.28
School rewards	6795	0.25	0.29
Invalidity	5856	0.18	0.22
Criterion variables			
Age	7700	14.16	1.88
Attachment to parents	7379	0.60	0.28
Self-reported delinquency	6477	0.17	0.20
Suspended past term	6623	0.22	0.41
Victimization	6662	0.15	0.21
Student has regular job	7503	0.35	0.58
Practical knowledge	5877	1.36	0.46
Residence more than 1 year	7691	0.88	0.33
Self-reported reading ability	6698	1.64	0.86
Psychological health	6193	0.66	0.30
Father employed	6615	1.56	0.78
Mother employed	6596	1.11	0.92
Adult at home after school	7373	1.36	0.75

Note. Students completed inventories in the Spring of 1983.

TABLE 7
Female Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	6410	1.92	1.17
Positive peer associations	7672	0.82	0.18
Educational expectation	7755	3.41	1.70
Social integration	6564	0.63	0.27
Attachment to school	7204	0.72	0.24
Belief in conventional rules	6659	0.74	0.22
Interpersonal competency	6625	0.79	0.21
Involvement	7457	0.21	0.18
Positive self-concept	6693	0.76	0.16
School effort	7740	0.66	0.29
Avoidance of punishment	7386	0.83	0.24
School rewards	7386	0.25	0.29
Invalidity	6679	0.12	0.17
Criterion variables			
Age	7883	14.03	1.88
Attachment to parents	7767	0.59	0.28
Self-reported delinquency	7333	0.11	0.14
Suspended past term	7267	0.13	0.33
Victimization	7291	0.10	0.16
Student has regular job	7823	0.22	0.46
Practical knowledge	6639	1.34	0.45
Residence more than I year	7890	0.86	0.35
Self-reported reading ability	6841	1.68	0.84
Psychological health	6949	0.57	.032
Father employed	6710	1.51	0.79
Mother employed	6982	1.05	0.92
Adult at home after school	7665	1.39	0.74

Note. Students completed inventories in the Spring of 1983.

TABLE 8

Black Male Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	2357	2.16	1.02
Positive peer associations	2744	0.77	0.20
Educational expectation	2919	3.12	1.74
Social integration	2100	0.64	0.25
Attachment to school	2471	0.68	0.25
Belief in conventional rules	2148	0.65	0.25
Interpersonal competency	2120	0.79	0.22
Involvement	2704	0.21	0.18
Positive self-concept	2083	0.76	0.17
School effort	2829	0.58	0.29
Avoidance of punishment	2557	0.72	0.28
School rewards	2559	0.27	0.29
Invalidity	2123	0.19	0.22
Criterion variables			
Age	2984	14.03	1.90
Attachment to parents	2835	0.63	0.26
Self-reported delinquency	2405	0.15	0.18
Suspended past term	2469	0.25	0.44
Victimization	2469	0.14	0.20
Student has regular job	2887	0.32	0.57
Practical knowledge	2163	1.35	0.45
Residence more than 1 year	2967	0.89	0.32
Self-reported reading ability	2566	1.69	0.83
Psychological health	2268	0.66	0.30
Father employed	2443	1.59	0.75
Mother employed	2522	1.27	0.88
Adult at home after school	2836	1.37	0.70

TABLE 9

Black Female Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	2480	2.07	1.05
Positive peer associations	3031	0.84	0.17
Educational expectation	3080	3.55	1.65
Social integration	2546	0.63	0.26
Attachment to school	2818	0.74	0.22
Belief in conventional rules	2586	0.72	0.22
Interpersonal competency	2571	0.82	0.20
Involvement	2937	0.25	0.18
Positive self-concept	2559	0.81	0.15
School effort	3070	0.69	0.27
Avoidance of punishment	2905	0.80	0.25
School rewards	2904	0.29	0.31
Invalidity	2585	0.12	0.17
Criterion variables			
Age	3117	13.96	1.94
Attachment to parents	3078	0.61	0.26
Self-reported delinquency	2861	0.10	0.12
Suspended past term	2843	0.15	0.35
Victimization	2844	0.10	0.16
Student has regular job	3097	0.18	0.44
Practical knowledge	2582	1.36	0.43
Residence more than 1 year	3126	0.86	0.35
Self-reported reading ability	2703	1.73	0.85
Psychological health	2685	0.58	0.32
Father employed	2540	1.51	0.80
Mother employed	2740	1.19	0.90
Adult at home after school	3041	1.40	0.69

TABLE 10

White Male Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	1610	2.40	1.08
Positive peer associations	1744	0.70	0.23
Educational expectation	1780	3.16	1.73
Social integration	1505	0.64	0.28
Attachment to school	1661	0.59	0.28
Belief in conventional rules	1509	0.67	0.26
Interpersonal competency	1494	0.75	0.25
Involvement	1701	0.16	0.15
Positive self-concept	1537	0.70	0.18
School effort	1769	0.50	0.31
Avoidance of punishment	1682	0.'7	0.27
School rewards	1685	0.17	0.25
Invalidity	1511	0.12	0.18
Criterion variables			
Age	1805	14.42	1.91
Attachment to parents	1762	0.52	0.28
Self-reported delinquency	1626	0.22	0.22
Suspended past term	1673	0.18	0.39
Victimization	1678	0.15	0.21
Student has regular job	1788	0.44	0.61
Practical knowledge	1505	1.39	0.46
Residence more than 1 year	1808	0.92	0.28
Self-reported reading ability	1590	1.72	0.90
Psychological health	1582	0.68	0.30
Father employed	1690	1.68	0.69
Mother employed	1663	1.16	0.88
Adult at home after school	1760	1.22	0.81

TABLE 11

White Female Student Characteristics

Variable	*n*	*M*	*SD*
ESB scales and indexes			
Parental education	1790	2.28	1.11
Positive peer associations	1903	0.78	0.20
Educational expectation	1911	3.36	1.69
Social integration	1719	0.65	0.28
Attachment to school	1845	0.66	0.26
Belief in conventional rules	1739	0.77	0.22
Interpersonal competency	1727	0.78	0.22
Involvement	1859	0.19	0.16
Positive self-concept	1781	0.74	0.17
School effort	1918	0.64	0.31
Avoidance of punishment	1888	0.84	0.24
School rewards	1889	0.18	0.25
Invalidity	1747	0.08	0.13
Criterion variables			
Age	1928	14.36	1.85
Attachment to parents	1909	0.52	0.29
Self-reported delinquency	1844	0.16	0.17
Suspended past term	1865	0.10	0.31
Victimization	1875	0.10	0.16
Student has regular job	1928	0.33	0.52
Practical knowledge	1733	1.34	0.47
Residence more than 1 year	1932	0.90	0.29
Self-reported reading ability	1684	1.80	0.84
Psychological health	1795	0.60	0.33
Father employed	1811	1.69	0.67
Mother employed	1817	1.15	0.88
Adult at home after school	1887	1.24	0.81

Note. For tables 8 through 11 all students completed inventories in the Spring of 1983.

correlations for selected subgroups are shown in Tables 14 and 15. Table 14 shows correlations for black and white males, and Table 15 shows correlations for black and white females. The interpretation of these external criteria requires a brief account of their characteristics. Details of the psychometric properties of most of these external criteria may be found in two technical reports (G. Gottfredson et al., 1983; G. Gottfredson et al., 1982). The measures are briefly described in the following list; reliability information is taken from G. Gottfredson et al. (1983) unless otherwise noted.

Age. A student's self-reported age in years.

Attachment to Parents. This six-item scale, intended to measure Hirschi's construct of the same name, incorporates several items closely related to items shown in earlier studies to be correlated with delinquent behavior (D. Gottfredson, 1981b; Hindelang, Hirschi, & Weis, 1981; Hirschi, 1969). The scale, asking students how close they are to their parents, how much they like them, and so forth, has an alpha reliability of .60. It correlates negatively with delinquent behavior in accord with Hirschi's (1969) theory that attachment to parents creates a stake in conforming behavior.

Self-Reported Delinquency. This self-report measure is modified from those used by Elliot and Ageton (1980) and by Hindelang et al. (1981). Many of Elliot's items were used, but a "last-year variety" scale format was used because the Hindelang et al. (1981) results suggested the usefulness of this format. These items ask "In the *last year* have you ..." Respondents indicate, for example, whether they have "stolen or tried to steal something worth more than $50." The 19-item scale has an alpha reliability of .85. The subgroup reliabilities for various sex-ethnic groups range from .83 to .88.

Suspension Past Term. This is the student's report that he or she was or was not suspended during the past term at school. “Yes” is coded 1; “no” is coded 0.

Victimization. The Victimization Scale contains five items and has an alpha reliability of.69. Intended to assess the variety of personal victimization in school in the past month, the items ask about incidents of thefts, robberies, assaults, and threats.

Student Job. This is the student's response to a single item asking “Do you have a regular part-time or full-time job?” “Yes — regular full-time” is coded 2; “Yes — regular part-time” is coded 1; and “No” is coded 0.

Practical Knowledge. This seven-item measure provides a simple measure of self-reported competencies needed for coping with everyday life.

TABLE 12
Correlations Among ESB Measures of Student Characteristics

Measure	1 PE	2 PPA	3 EE	4 SI	5 AS	6 BCR	7 IC	8 Inv	9 PSC	10 SE	11 AP	12 SR	13 Iy
1. Parental education (PE)	—	03	25	05	-04	02	08	08	09	08	-03	-01	-05
2. Positive peer associations (PPA)	05	—	24	29	43	33	21	09	33	33	23	11	-07
3. Educational expectation (EE)	26	24	—	13	16	15	14	12	25	25	09	08	-10
4. Social integration (SI)	11	29	17	—	46	31	23	04	42	23	20	05	-16
5. Attachment to school (AS)	-02	40	19	44	—	36	30	12	38	36	24	23	-08
6. Belief in conventional rules (BCR)	06	26	15	26	29	—	08	00	32	21	25	00	-19
7. Interpersonal competency (IC)	07	17	16	27	28	06	—	08	35	19	10	08	-16
8. Involvement (Inv)	19	11	18	08	15	-02	13	—	08	11	-09	30	14
9. Positive self-concept (PSC)	14	30	27	43	33	21	32	16	—	43	24	11	-23
10. School effort (SE)	10	31	29	24	36	19	19	16	43	—	18	22	-06
11. Avoidance of punishment (AP)	-03	22	08	18	25	26	10	-06	19	21	—	-09	-11
12. School rewards (SR)	05	12	13	11	23	00	12	32	18	22	-04	—	18
13. Invalidity (Iy)	-06	00	-05	-05	05	- 14	-02	09	-11	00	-07	19	—

Note. Decimals omitted. Males above diagonal, females below diagonal. Lowest pairwise *n* for males = 5830. Lowest pairwise *n* for females = 5445.

The scale has an alpha reliability coefficient of .75. It is relatively independent of the other measures of attitudes and behavior. Because this simple measure has not been well-studied, it should be interpreted cautiously.

Residence Over 1 Year. This is the response to a single item that asks "How long have you lived in the house or apartment where you live now?" One year or less is coded 0; more than one year is coded 1.

Reading Ability. This is the response to a single item asking "How would you rate yourself in reading ability compared to other students?" Responses are made using four options ranging from below average (coded 0) to top 10% (coded 3).

Psychological Health. This scale is composed of four true-false items asking about symptoms of poor psychological well-being ("I get tired easily; I feel sad a lot of the time; I worry about lots of little things; I often feel tense"). A high score is earned by rejecting these items. This scale (which is not described in the earlier technical reports) has a reliability (KR-21) of .52 for males and .56 for females.

Father Employed. This is a response to a single item asking if the student's father (guardian) is employed. A response of "Yes — full-time" is coded 2; "Yes — part-time" is coded 1; "No" is coded 0.

Mother Employed. This item parallels the question about father's employment.

Adult at Home. This is the response to a single item asking "When you go directly home after school, is there usually an adult at home?" A response "almost always" is coded 2, "sometimes" is coded 1, and "hardly ever" is coded 0.

A detailed scale-by-scale interpretation of correlations shown in Table 13 for males and females (and the additional correlations for subgroups of black and white males and females shown in Table

TABLE 13

Correlations Between ESB Measures of Student Characteristics and Criterion Measures – Males and Females

		Criterion measures												
ESB measure		Age	Attach. to par.	Self-rep. delinq.	Susp.	Vic-tim.	Student job	Pract. knowl.	Res. > 1 year	Reading ability	Psych. health	Father empl.	Mother empl.	Adult at home
Parental education	M	−10	02	05	−03	04	06	07	04	17	07	20	23	−17
	F	−08	04	01	−03	02	06	06	06	17	13	23	23	−13
Positive peer associations	M	−04	26	−53	−20	−21	06	11	02	07	12	02	00	11
	F	−02	26	−46	−16	−18	−07	07	00	11	13	05	01	08
Educational expectation	M	−12	10	−12	−15	−02	−03	16	02	21	10	12	08	−04
	F	−11	13	−14	−11	−03	−02	14	04	25	13	14	12	−04
Social integration	M	04	21	−21	−15	−25	−03	10	05	09	44	04	02	06
	F	04	25	−22	−12	−18	−01	09	05	11	48	04	01	07
Attachment to school	M	01	32	−43	−17	−24	−03	12	01	06	10	−01	−04	12
	F	00	32	−42	−15	−16	−04	09	00	07	12	00	−04	11
Belief in conventional rules	M	01	20	−36	−20	−23	−05	05	04	08	18	02	00	07
	F	09	16	−30	−17	−19	−02	03	04	11	17	06	01	04
Interpersonal competency	M	10	17	−12	−07	−14	01	30	02	12	13	04	−02	03
	F	09	17	−10	−06	−09	01	25	02	12	15	06	02	05
Involvement	M	−07	12	−03	02	15	12	09	01	10	−04	01	03	00
	F	−08	13	−04	02	15	10	17	05	16	04	07	09	−01
Positive self-concept	M	−01	27	−30	−20	−27	−04	19	06	22	33	07	04	07
	F	−01	30	−30	−16	−18	−05	15	06	24	31	07	05	07
School effort	M	−10	26	−33	−17	−12	−03	10	05	18	11	03	02	09
	F	−06	25	−31	−15	−12	−02	10	06	24	16	07	03	08
Avoidance of punishment	M	15	07	−28	−25	−32	04	07	02	05	13	01	−06	04
	F	17	12	−33	−24	−29	−02	04	03	05	09	00	−05	04
School rewards	M	−12	16	−11	−01	16	07	08	02	07	−07	−02	−02	07
	F	−12	17	−10	00	14	03	12	02	14	01	02	00	04
Invalidity	M	−02	−04	00	11	22	05	−08	−04	−08	−18	−08	−04	03
	F	−08	05	−06	08	14	00	02	−03	−01	−08	−10	−06	05

Note. Decimals omitted. Males above, females below. Smallest pairwise n for males = 5359. Smallest pairwise n for females = 5503.

14 and 15) will be deferred until one more set of data is presented. Overall, however, it is important to note that the pattern of correlations for males and females is extremely similar, strongly supporting the interpretation that the scales of the ESB work in similar ways for both sexes. The correlations for blacks are generally lower (but in the same direction and showing a similar pattern) as the corresponding correlations for whites, suggesting that the scales work in similar ways for both blacks and whites but that measurement may be somewhat weaker for blacks. The lower correlations for blacks than for whites is consistent with the somewhat lower reliabilities for blacks presented in an earlier table.[3]

Correlations of ESB Measures with Academic Achievement

No comprehensive evidence summarizing the relations of the ESB scales to measures of academic achievement is available. Evidence is available for a sample of black students from a southern city school system who met the criteria for selection into a special alternative education program for students with difficulty in school. To be included, these students either (a) scored in the bottom quartile on the California Test of Basic Skills (CTBS), (b) had low grades, or (c) experienced atypically high levels of disciplinary difficulties in their schools. Correlations for this sample, shown in Table 16, are lower than would be expected for a sample not restricted in the range of academic achievement. The sample is 56% male and 44% female. The correlations shown in Table 16 range from -.26 to .20. Although most are significantly different from zero, the correlations are so low that it is clear the ESB scales are measuring something *other* than academic achievement. At the same time, most of the correlations are in accord with expectations. The Invalidity index correlates -.26 with CTBS score, suggesting that one source of careless responding is reading difficulty. Parental Education is negatively correlated with academic achievement, supporting the interpretation of this scale as a measure of family background conducive to educational achievement.

TABLE 14

Correlations Between ESB Measures of Student Characteristics and Criterion Measures – Black and White Males

		Criterion measures												
ESB measure		Age	Attach. to par.	Self-rep. delinq.	Susp.	Vic-tim.	Student job	Pract. knowl.	Res. > 1 year	Reading ability	Psych. health	Father empl.	Mother empl.	Adult at home
Parental education	B	−11	09	00	−01	04	04	09	−03	09	04	11	16	−08
	W	−08	07	−04	−11	02	02	07	03	26	14	24	16	−20
Positive peer associations	B	−05	20	−40	−15	−16	−02	17	03	09	12	04	05	06
	W	−06	26	−58	−28	−18	−05	06	02	13	14	09	−02	09
Educational expectation	B	−17	08	−12	−14	−05	−04	15	00	18	10	08	10	−02
	W	−10	16	−19	−21	02	−01	16	02	34	14	18	08	−06
Social integration	B	07	21	−14	−14	−27	−02	11	06	10	41	06	04	06
	W	01	26	−23	−16	−19	−02	10	06	13	52	10	02	03
Attachment to school	B	01	28	−36	−16	−22	04	15	01	04	08	02	−04	10
	W	00	35	−45	−23	−22	−03	11	06	12	11	04	00	09
Belief in conventional rules	B	03	17	−30	−18	−22	−03	10	06	08	17	01	00	07
	W	−01	24	−44	−25	−22	−08	−01	00	−12	13	04	02	05
Interpersonal competency	B	10	18	−16	−10	−17	−01	27	02	11	12	02	02	04
	W	15	18	−13	−06	−14	04	34	06	14	23	04	−05	02
Involvement	B	−03	09	−02	−02	16	18	16	02	05	−04	00	00	00
	W	−18	15	−10	−07	11	05	07	06	22	05	08	08	00
Positive self-concept	B	02	26	−28	−19	−34	−03	21	04	18	27	08	06	05
	W	00	30	−35	−23	−24	−03	17	06	29	41	07	04	06
School effort	B	−06	21	−27	−14	−12	00	15	04	17	08	01	03	06
	W	−15	31	−38	−20	−12	−05	01	07	21	18	03	−02	08
Avoidance of punishment	B	13	06	−18	−19	−28	−01	06	02	04	16	02	−02	00
	W	15	10	−41	−31	−33	−05	07	05	09	11	05	−02	04
School rewards	B	−09	12	−10	00	17	15	12	03	05	−10	03	−02	05
	W	−12	15	−08	03	14	05	05	03	14	−03	−04	−02	04
Invalidity	B	−03	−08	−01	08	24	12	−05	−03	−05	−19	−07	−03	03
	W	−02	−07	09	15	23	−01	−11	00	−10	−18	−03	−04	02

Note. Decimals omitted. Blacks above, whites below. Smallest pairwise n for blacks = 1930. Smallest pairwise n for whites = 1450.

[3]The generally poorer measurement for blacks is related to a similar problem of differential reliability in studies of educational persistence (Bielby, Hauser, & Featherman, 1977; D. Gottfredson, 1981a).

A Summary of the Correlational Evidence

In this section, the correlations presented in earlier tables are summarized in narrative form for each measure of student characteristics. This characterization supplements the evidence from earlier research, some of which was summarized when each measure was introduced earlier in this chapter. For simplicity, correlations from the pooled sample are incorporated in these narratives rather than tediously reiterating the correlations for each subsample. Only correlations of .20 or greater are mentioned. The dedicated reader can review the earlier tables to compare subgroups.

Parental Education. Parental Education is positively correlated with Educational Expectation, Father's Employment, and Mother's Employment. These correlations support the interpretation of this scale as a measure of family socioeconomic standing. More highly educated parents would be expected to emphasize the importance of education to their children, to have children who expect to complete more education, and to be employed.

Positive Peer Associations. This scale is positively correlated with Educational Expectation, Social Integration, Attachment to School, Belief in Conventional Rules, Interpersonal Competency (males), Positive Self-Concept, School Effort, Avoidance of Punishment, and Attachment to Parents. It is negatively correlated with Self-Reported Delinquency, Suspension (males), and Victimization (males). This pattern of correlations implies that the scale assesses an aspect of peer relations that is strongly associated with a broad range of important prosocial vs. antisocial conduct. The scale's inverse correlations with self-reported delinquent behavior are very high (-.53 for males, -.46 for females).

Educational Expectation. This index is positively correlated with Parental Education, Positive Peer Associations, Positive Self-Concept, School Effort, and Reading Ability. This index also correlates .17 with an achievement test in a low ability urban black sample. This pattern of correlations supports the interpretation of this index as a measure of a student's commitment to education and prospects for educational attainment.

TABLE 15

Correlations Between ESB Measures of Student Characteristics and Criterion Measures – Black and White Females

ESB measure		Criterion measures: Age	Attach. to par.	Self-rep. delinq.	Susp.	Vic-tim.	Student job	Pract. knowl.	Res. > 1 year	Reading ability	Psych. health	Father empl.	Mother empl.	Adult at home
Parental education	B	−06	08	−01	00	01	05	06	02	06	11	14	18	−08
	W	−07	09	−15	−13	−05	−04	05	09	29	15	24	11	−12
Positive peer associations	B	−01	18	−36	−14	−14	−04	06	01	10	17	10	06	06
	W	−07	30	−53	−25	−21	−06	07	03	23	18	07	−01	09
Educational expectation	B	−13	10	−10	−10	−06	−01	14	03	22	15	13	17	−06
	W	−09	15	−23	−15	01	−02	15	08	38	16	19	09	−08
Social integration	B	03	26	−21	−12	−16	00	08	07	07	47	04	03	05
	W	00	28	−28	−16	−21	−04	14	05	18	53	05	01	07
Attachment to school	B	−02	26	−33	−14	−14	−02	09	02	07	15	05	03	08
	W	−04	37	−46	−21	−16	−01	08	02	13	11	01	−04	10
Belief in conventional rules	B	07	15	−30	−16	−15	−03	04	02	11	20	09	02	09
	W	05	25	−46	−22	−20	01	06	02	18	12	04	05	02
Interpersonal competency	B	08	14	−11	−05	−10	01	22	00	12	10	04	02	04
	W	13	24	−12	−05	−09	05	28	01	13	26	03	00	06
Involvement	B	−04	12	−01	04	16	11	20	06	13	02	05	07	01
	W	−13	15	−11	−08	11	06	11	11	24	08	12	07	−02
Positive self-concept	B	03	27	−27	−18	−20	−02	13	04	23	31	07	04	08
	W	−03	34	−40	−23	−21	−03	20	07	31	38	04	01	06
School effort	B	−04	24	−27	−17	−12	01	12	07	25	20	07	06	09
	W	−08	30	−39	−18	−12	−02	08	04	29	14	06	−01	08
Avoidance of punishment	B	16	06	−25	−24	−25	00	01	04	05	11	05	00	01
	W	11	22	−47	−26	−27	01	09	−01	14	11	−01	−04	08
School rewards	B	−11	12	−04	02	17	05	14	05	16	02	05	01	00
	W	−10	21	−12	−05	09	04	12	05	20	00	05	02	06
Invalidity	B	−08	04	−03	07	13	02	03	−02	00	−07	−06	−02	02
	W	−05	−02	06	11	14	−02	−03	−06	−03	−11	−08	−03	06

Note. Decimals omitted. Blacks above, whites below. Smallest pairwise *n* for blacks = 2094. Smallest pairwise *n* for whites = 1658.

TABLE 16
Correlations Between ESB Measures and Scores in a Low Achieving Urban Sample

ESB scales and indexes	*r*	*n*	*p*
Parental education	-.12	496	.006
Positive peer associations	.11	576	.010
Educational expectation	.17	605	.001
Social integration	.13	470	.005
Attachment to school	.03	541	.429
Belief in conventional rules	.20	479	.001
Interpersonal competency	.14	475	.002
Involvement	-.11	553	.007
Positive self-concept	.11	464	.014
School effort	.12	578	.005
Avoidance of punishment	.20	546	.001
School rewards	-.14	547	.001
Invalidity	-.26	467	.001

Note. Students completed inventories in the Spring of 1983; CTBS was administered in Fall, 1982.

Social Integration. This scale correlates positively with Positive Peer Associations, Attachment to School, Belief in Conventional Rules, Interpersonal Competency, Positive Self-Concept, School Effort, Avoidance of Punishment (males), Attachment to Parents, and Psychological Health. It correlates negatively with Self-Reported Delinquency and Victimization (males). This pattern of correlations implies that this scale may be interpreted as an inverse measure of alienation. Its high correlations (all above .40) with Psychological Health, Attachment to School, and Positive Self-Concept imply that it is a good measure of social well-being or connectedness to the school social order.

Attachment to School. This scale correlates positively with Positive Peer Associations, Social Integration, Belief in Conventional Rules, Interpersonal Competency, Positive Self-Concept, School Effort, Avoidance of Punishment, School Rewards, and Attachment to Parents. It is negatively correlated with Self-Reported Delinquency and Victimization (males). Other evidence (G. Gottfredson et al., 1982) implies that this scale is also correlated positively with self-reports of school attendance. This pattern of correlations supports the interpretation of this scale as a general measure of liking for school.

Belief in Conventional Rules. This scale is positively correlated with Positive Peer Associations, Social Integration, Attachment to School, Positive Self-Concept, School Effort (males), Avoidance of Punishment, and Attachment to Parents (males). For a low ability urban black group, it is also positively correlated with scores on an achievement test. The scale is negatively correlated with Self-Reported Delinquency, Suspensions (males), and Victimization (males). This pattern of correlations is consistent with the interpretation of this scale as a measure of internalized social restraint against misconduct.

Interpersonal Competency. This scale is positively correlated with Positive Peer Associations (males), Social Integration, Attachment to School, Positive Self-Concept, and Practical Knowledge. This pattern of correlations, and its relatively low but positive correlation with Psychological Health, supports the interpretation of this scale as a measure of social skills which is relatively independent of psychological well-being/neuroticism.

Involvement. This scale is positively correlated with School Rewards. It has low correlations with most other measures, suggesting that this is a rather narrow measure of participation in school activities. These low correlations with other measures also suggest that, contrary to popular opinion, involvement in school activities may not be an important determiner of attachment to school or an important restraint against delinquent behavior.

Positive Self-Concept. This scale is positively correlated with Positive Peer Associations, Educational Expectation, Social Integration, Attachment to School, Belief in Conventional Rules, Interpersonal Competency, School Effort, Avoidance of Punishment (males), Attachment to Parents, Reading Ability, and Psychological Health. It is negatively correlated with Self-Reported Delinquency, Suspensions (males), Victimization (males), and Invalidity (males). Other evidence (G. Gottfredson et al., 1982) implies that this scale is also positively correlated with school grades and attendance. This pattern of correlations is consistent with the interpretation of this scale as a measure of positive (as opposed to negative) self-image incorporating educational and problem-behavioral aspects. The moderate correlation (-.23) for males with the Invalidity index suggests that careless responding may contribute to low scores on this scale or that males with negative self-concepts do not cooperate with the administration of the ESB.

School Effort. This scale correlates positively with Positive Peer Associations, Educational Expectation, Social Integration, Attachment to School, Belief in Conventional Rules (males), Involvement, Avoidance of Punishment (females), School Rewards, Attachment to Parents, and Reading Ability (females). It correlates negatively with Self-Reported Delinquency. Other evidence (G. Gottfredson et al., 1982) implies that it is also positively correlated with attendance and school grades. This pattern of correlations supports the interpretation of this scale as a measure of effort and care devoted to school work.

Avoidance of Punishment. This scale correlates positively with Positive Peer Associations, Social Integration (males), Attachment to School, Belief in Conventional Rules, Positive Self-Concept (males), and School Effort (females). (In a sample of urban black low achievers, the scale correlates.20 with CTBS scores.) The scale correlates negatively with Self-Reported Delinquency, Suspensions, and Victimization. Taken together this pattern of correlations suggests that this scale is an inverse measure of the negative sanctions a student experiences for misconduct or because of other characteristics that make the student vulnerable to negative interactions with others.

School Rewards. This scale correlates positively with Attachment to School, Involvement, and School Effort. This pattern of correlations is consistent with the interpretation of this scale as a measure of positive or rewarding experiences in school arising from successful performance of educational tasks.

Invalidity. This administrative index correlates -.23 with Positive Self-Concept (males) and .22 with Victimization (males). It also correlates -.26 with CTBS scores in an urban black low achieving sample. Its median correlation with all other ESB scales and indexes is -.04 for females and -.09 for males. Taken together these data suggest that (a) careless responses may be somewhat higher for low ability students, (b) most scales of the ESB are answered in a careful way, (c) persons with poor self-concepts may cooperate less with the survey than others, and (d) untruthful or careless responding may moderately contribute to negative self-presentation.

TABLE 17

Means and Standard Deviations of Students Selected and Not Selected for Participation in an Alternative Education Program

ESB measure	Alternative program			Other 8th graders			
	M	*SD*	*n*	*M*	*SD*	*n*	*p*
Parental education	1.97	1.12	44	2.61	1.12	217	.001
Positive peer associations	.66	.29	49	.77	.22	231	.005
Educational expectation	2.76	1.89	51	3.47	1.75	235	.01
Social integration	.54	.26	38	.62	.28	150	
Attachment to school	.62	.25	45	.61	.28	202	
Belief in conventional rules	.65	.23	35	.68	.28	147	
Interpersonal competency	.82	.24	37	.75	.24	140	
Involvement	.17	.16	51	.17	.15	229	
Positive self-concept	.68	.15	39	.72	.18	166	
School effort	.48	.32	51	.54	.32	230	
Avoidance of punishment	.74	.27	47	.76	.26	213	
School rewards	.20	.24	47	.13	.19	213	.02

Note. Students completed inventories in the Spring of 1982. Source: Cook (1983). Some variables were presented in a different metric in the original report and have been rescaled in this table.

TABLE 18

Means and Standard Deviations of Students Failing a Reading Test and Other Students in Grades Seven and Eight

ESB measure	Poor Readers			Other Students			
	M	*SD*	*n*	*M*	*SD*	*n*	*p*
Parental education	1.33	.86	15	2.60	1.20	496	.001
Positive peer associations	.44	.28	14	.67	.22	533	.001
Educational expectation	1.35	1.70	17	3.43	1.76	549	
Social integration	.49	.32	7	.62	.29	335	
Attachment to school	.43	.23	10	.64	.28	464	.02
Belief in conventional rules	.57	.19	5	.71	.19	327	
Interpersonal competency	.83	.32	6	.78	.23	322	
Involvement	.12	.14	15	.18	.16	535	
Positive self-concept	.55	.21	5	.74	.18	379	.03
School effort	.28	.32	16	.59	.32	547	.001
Avoidance of punishment	.55	.32	9	.79	.25	488	.005
School rewards	.11	.18	9	.17	.23	487	

Note. Students completed inventories in the Spring of 1982. Source: Cook (1983). Some variables were presented in a different metric in the original report and have been rescaled in this table.

Additional Evidence

One way to assess the validity of psychological measures is to compare the scores of groups known to differ in important ways. The mean scores of the groups should differ as expected. This subsection presents some evidence of this kind.

Cook (1983) has reported mean scores on ESB scales for a group of students selected by teacher, counselor, and administrator nominations to participate in a special educational program for junior high school students with behavioral and academic problems in school. These eighth graders attended one of three junior high schools in a mid-sized northcentral city; about 80% are white (the remainder mostly black). Mean age is 14 years; half are male and half are females. Surveys were administered in the Spring of 1982 after students had participated in the program for almost one school year. The program was designed to provide a more rewarding environment for the students. Table 17 shows these means and the means of eighth graders in this school who were not selected for participation in the special program. Most of the significant differences in the table favor the students not selected for the program. Nominated students have lower scores on Parental Education, Positive Peer Associations, Educational Expectation, and School Grades. Nominated students score higher on School Rewards than other students, as expected from the nature of the program they participated in. Differences on other scales are not significant.

In another examination of students in the same school, Cook (1983) compared students who were selected to participate in a reading skills lab with other students. The criterion for selection into the skills lab was an inability to read at the sixth grade level according to a standardized reading test. Table 18 compares students in grades 7 and 8 selected for the reading program with other seventh and eighth graders in the school. This is a severe test of the ability of the ESB to discriminate among groups, because most of the persons in the low reading ability group are minimally able to read the questionnaire. (This explains the large proportions of missing data for this group, especially for scales in which the items appear near the end of the questionnaire.) Despite this missing data problem, the pattern of mean differences is according to expectations.

Summary

This chapter has provided a summary of some aspects of the development, reliability, and validity of the measures of student characteristics in the ESB. An understanding of these matters is important in evaluating student population measures presented in ESB profiles, because these profiles show averaged student characteristics. Information about the measures of teacher characteristics is presented in the next chapter, and subsequent chapters describe the properties of the school psychosocial climate scales. The measures of students described in the present chapter were developed to describe the characteristics of *groups* of students in educational evaluations and school planning. The evidence in this chapter implies that the properties of these scales support the intended use.

Chapter 5
Measures of Teacher Characteristics

The second largest group of inhabitants of a school are the teachers who work there. Students in the aggregate help to create an environment for the teachers, just as teachers create an environment for the students. A characterization of the teachers is therefore important in describing a school.

School improvement projects often incorporate interventions geared toward teachers. The interventions are intended to improve classroom management, to change teachers' attitudes, or to involve them in new kinds of activities. The measurement of these teacher characteristics is therefore important in a school climate battery. Because most schools are concerned with the quality of school life and with maintaining a safe and orderly atmosphere in their schools, measures were developed to assess teachers' perceptions and attitudes about these aspects of school life. All measures are intended only for characterizing groups of teachers in educational evaluations and for describing the population of teachers in schools. They are not intended for individual assessment.

To make school profiles of averaged teacher characteristics easy to interpret, each scale is scored so that a high score is a desirable outcome. For example, indicators of classroom disruption are incorporated in a scale called *Classroom Orderliness*, where a high score is desirable and a low score implies that teachers experience classroom disruption.

The Teacher Scales

The following measures of teacher characteristics are included in the battery:

Pro-Integration Attitude. This four-item scale is a measure of attitudes toward integrated education. It is included because school improvement programs are often designed to provide services to heterogeneous groups of students. In-service training programs often aim to train teachers to manage heterogeneous classrooms and to interact with a variety of students. High scorers reject items such as “Most black students are better off in all black schools” and “Students should not be bused to achieve racial balance.” As might be expected, nonwhites tend to score somewhat higher than whites on this scale.

Job Satisfaction. This scale is composed of three of the four items in Hoppock's (1935) scale of the same name, which has been used widely in research (Robinson, Athanasiou, & Head, 1969). All items directly ask teachers how much they like their jobs. It may confidently be taken as a measure of how well teachers like their jobs.

Interaction with Students. This six-item scale measures the extent of out-of-class interaction that a teacher has with students. Items ask about tutoring individual students before or after school and discussing students' personal problems with them.

Personal Security. As one way to measure how safe teachers are in a school, teachers are asked about their experiences of personal victimization. In the aggregate, these reports may be taken as an indicator of the amount of disorder in the school. An eight-item scale asks about events ranging from obscene remarks or gestures to physical attack. This scale is based on items from NIE's (1978) Safe School Study questionnaire, and on earlier research using these items (G. Gottfredson & D. Gottfredson, 1985).

Classroom Orderliness. A two-item Classroom Orderliness scale asks to what degree classroom disruption interferes with teaching, and how much of the teacher's time is devoted to coping with disruptive students.

Professional Development. Eight items form a scale measuring the extensiveness of recent continuing education or in-service learning. This scale is for use in documenting the implementation of training components.

Nonauthoritarian Attitudes. Intended in part to measure sympathetic attitudes, a three-item measure of punitive moralism is included in the ESB. To earn a high score on this scale, a teacher rejects such items as "A few pupils are just young hoodlums and should be treated accordingly."

Item Analyses and Single Occasion Reality

Scales were constructed by subjecting *a priori* scales to internal consistency item analysis. Data for initial item analyses came from the responses of teachers in 56 schools who completed questionnaires in the Spring of 1981. These were the same schools as those used in initial item analyses of the student scales (Table 1, Chapter 4) except that the St. Paul

schools did not participate. Item analyses were conducted in a random one-half sample (called the "construction sample"). The hold-out sample was used to obtain unbiased estimates of homogeneity of the scales in a sample other than the sample used to construct the scales. The results of these item analyses are presented in Table 19.

TABLE 19
Homogeneity Coefficients for the Individual-Level Teacher Scales, Number of Items in Each Scale, and Scale Means and Standard Deviations

Scale	Alpha	Number of items	M	SD
Pro-integration attitude	.69	4	2.89	.72
Job satisfaction	.80	3	2.81	.57
Interaction with students	.67	6	2.30	.70
Personal security	.67	8	.85	.15
Classroom orderliness	.78	2	2.72	.65
Professional development	.74	8	1.49	.26
Nonauthoritarian attitude	.54	3	2.47	.72

Note. Reliabilities, scale means, and standard deviations are based on results from the 1981 Spring administration of these scales and are calculated on the 'holdout' sample (see G. Gottfredson et al., 1982). Results presented in the technical report have been rescaled to reflect the current scoring procedure. *N*s range from 555 to 643 due to item nonresponse.

No evidence is available about the stability over time of the individual-level teacher measures, because individual teachers have not been identified in the research to develop these measures. (Evidence is available about the retest reliabilities of aggregated teacher measures in characterizing school climates. This evidence is presented in a subsequent chapter.)

Validity

One way to assess the validity of the teacher scales is to examine the item content of these scales; the items are shown in Appendix 2. The account of the measures presented earlier in this chapter is also useful in assessing these scales because it provides references to research on related measures. This section presents additional evidence about the validity of these scales by showing the correlates of the measures and the scores of different groups of teachers.

Scores for Males, Females, Blacks, and Whites

This section presents means and standard deviations for sex and ethnic groups to provide a context for the correlational evidence to be presented in the next subsection, and to provide a picture of the ways males and females, and blacks and whites, score on the ESB teacher measures. The evidence summarized in this and the next section is based on data collected in surveys in 50 schools conducted in the Spring of 1983. The schools were located in Los Angeles, CA; Chicago, IL; Kalamazoo, MI; South Bronx, NY; Playa de Ponce, PR; Charleston, SC; St. Croix, VI; Plymouth, MI; St. Paul, MN; several cities in New Jersey; and Baltimore, MD.

Mean scores on ESB measures of male and female teacher characteristics are presented in Table 20, and mean scores for black and white teachers are presented in Table 21. These tables also show mean scores for several criterion variables to be discussed shortly. Each of the ESB measures is scored in what is presumed to be the desirable direction; that is, a high score is a desirable outcome. With the exception of the Personal Security scale, each ESB scale is composed of Likert-type items and may not be interpreted as "proportion of responses in the desired direction" as was true of most student scales. Only the Personal Security scale may be interpreted as the proportion of responses in the desired direction (i.e., proportion of victimization types not experienced in the past month).

Table 20 documents that sex differences in scores on the teacher scales of the ESB are very small. Table 21 shows that differences between black and white teachers in mean scores are also small, with two exceptions. As might be expected, black teachers score higher than white teachers on the Pro-integration Attitude scale, about a third of a standard deviation higher. Black teachers also score about a third of a standard deviation higher than white teachers on the Professional Development scale, suggesting that black teachers in this sample participated in more in-service training activities during the year than did white teachers. This difference may just be a peculiarity of the present sample.

Correlations Among the Measures

The correlations among the scales measuring teacher characteristics are important for two reasons: (a) The scales should be reasonably independent of each other (redundant measures of essentially the same teacher characteristics by scales with different

TABLE 20
Male and Female Teacher Characteristics

Measure	Male Teachers			Female Teachers		
	M	*SD*	*n*	*M*	*SD*	*n*
ESB measures						
Pro-integration attitude	2.93	.68	502	3.06	.62	634
job satisfaction	2.80	.62	521	2.84	.55	667
Interaction with students	2.24	.67	528	2.21	.59	674
Personal security	.85	16	495	.89	.15	651
Classroom orderliness	2.78	.61	525	2.78	.59	664
Professional development	1.45	.26	524	1.50	.26	656
Nonauthoritarian attitude	2.51	.73	510	2.65	.66	642
Criterion measures						
Hesitates to confront students	1.30	.67	528	1.41	.74	683
Average class size	26.93	8.99	522	25.72	10.03	671
Use or threaten physical punishment	1.32	.64	510	1.24	.55	636
Use of grade as sanction	.26	.44	527	.20	.40	685
Teacher educational attainment	3.34	.93	461	3.14	.95	616
Years taught this school	9.82	7.21	531	7.91	6.73	669

Note. Teachers completed inventories in the Spring of 1983.

TABLE 21
Black and Wbite Teacber Cbaracteristics

Measure	Black Teachers			White Teachers		
	M	*SD*	*n*	*M*	*SD*	*n*
ESB measures						
Pro-integration attitude	3.12	.64	374	2.92	.64	659
job satisfaction	2.84	.58	388	2.79	.59	674
Interaction with students	2.27	.63	389	2.17	.62	687
Personal security	.90	14	375	.86	16	656
Classroom orderliness	2.81	.59	386	2.76	.58	677
Professional development	1.55	.26	374	1.43	.24	678
Nonauthoritarian attitude	2.50	.66	379	2.61	.71	663
Criterion measures						
Hesitates to confront students	1.31	.67	394	1.37	.71	687
Average class size	25.39	9.54	393	26.33	9.41	680
Use or threaten physical punishment	1.44	.72	376	1.18	.48	661
Use of grade as sanction	.18	.39	397	.26	.44	692
Teacher educational attainment	3.15	.96	359	3.33	.90	609
Years taught this school	8.74	7.22	389	9.08	7.00	687

Note. Teachers completed inventories in the Spring of 1983.

names should be avoided), and (b) the correlations among the scales provide some insight into the meanings or construct validity of the measures. Correlations among ESB teacher measures are shown in Table 22 for males (above the diagonal) and females (below the diagonal).

Inspection of Table 22 implies that the scales are reasonably independent. For males the correlations range from .00 to .35, with a median of .13. For females the correlations range from -.06 to .34, with a median absolute value of .16. The corresponding correlations for black and white teachers, shown in Table 23, are similar to the correlations presented in Table 22. The largest correlation between scales is a correlation of .42 between Pro-integration Attitude and Nonauthoritarian Attitude for white teachers. This correlation is only .13 for black teachers. With this single exception, the correlations in Tables 22 and 23 suggest that the ESB teacher measures work in similar ways for both sexes and for black and white teachers.

TABLE 22
Correlations Among ESB Measures of Teacher Characteristics — Males and Females

Measure	1 PIA	2 JS	3 IWS	4 PS	5 CO	6 PD	7 NA
Pro-integration attitude (PIA)	—	12*	11	13*	09	07	321
Job satisfaction (JS)	-02	—	34*	27*	35*	22*	23*
Interaction with students (IWS)	-05	26*	—	00	09	32*	12*
Personal security (PS)	05	22*	05	—	32*	01	26*
Classroom orderliness (CO)	-06	31*	14*	34*	—	03	26*
Professional develop-ment (PD)	03	28*	22*	06	10*	—	06
Nonauthori-tarian attitude (NA)	28*	17*	09	18*	14*	03	—

Note. Decimals omitted. Correlations for males shown above the diagonal; correlations for females below the diagonal. Teachers completed surveys in the Spring of 1983. Lowest pairwise *n* for males = 475. Lowest pairwise *n* for females = 609.
*$p < .01$

TABLE 23
Correlations Among ESB Measures of Teacher Characteristics — Black and White Teachers

Measure	1 PIA	2 JS	3 IWS	4 PS	5 CO	6 PD	7 NA
Pro-integra-tion attitude (PIA)	—	01	-04	03	-10	00	13
Job satisfaction (JS)	07	—	27*	26*	29*	33*	19*
Interaction with students (IWS)	06	31*	—	10	17*	28*	15*
Personal security (PS)	09	27*	-02	—	33*	13	15*
Classroom orderliness (CO)	04	37*	08	32*	—	17*	06
Professional develop-ment (PD)	05	22*	26*	-04	-01	—	14*
Nonauthori-tarian attitude (NA)	42*	22*	10	26*	23*	05	—

Note. Decimals omitted. Correlations for black teachers shown above the diagonal; correlations for white teachers below the diagonal. Teachers completed surveys in the Spring of 1983. Lowest pairwise *n* for black teachers = 354. Lowest pairwise *n* for white teachers = 634.
*$p < .0l$

Correlations with External Criteria

The correlations of the ESB teacher measures with some external self-report criteria are presented for males and females in Table 24. The same correlations are shown for black and white teachers in Table 25. The interpretation of these correlations requires a brief explanation of the criterion variables. Each is a single self-report item about behavior or accomplishments that are verifiable, at least in principle. The following list describes the criterion variables:

Hesitates to Confront Students. This is the response to the following item: "Since school started this year, how many times did you hesitate to confront misbehaving students for fear of your own safety?" Teachers responded using a 5-option Likert-type scale ranging from "never" (coded 1) to "nearly all the time" (coded 5).

Average Class Size. This is the response to the following item: "What is the average number of students in the classes you teach?"

Use or Threaten Physical Punishment. This is the response to an item asking "In your dealings with misbehaving students how often do you use or threaten to use physical punishment?" Response options ranged from "very seldom" (coded 1) to "very often" (coded 4).

Use of Grade as Sanction. This is the response to the following true-false item: "When a student misbehaves *in my class*, I sometimes lower his or her grade." True is coded 1, and false is coded 0.

Teacher Educational Attainment. This is the teacher's report of the highest level of education completed: less than bachelor's degree = 1, bachelor's degree = 2, fifth year certification = 3, master's degree = 4.

Years Taught This School. This is the teacher's report of the number of years of experience as a full-time teacher in the present school.

The correlations in Tables 24 and 25 support the interpretation that the scales of the ESB work in similar ways for male and female, and black and white teachers.

Additional evidence about the correlates of the ESB teacher scales is presented in Table 26. Junior and senior high school teachers in seven urban, nearly 100% black schools in a Southern city

TABLE 24
Correlations Between ESB Measures and Selected Criterion Variables for Males and Females

ESB measure	Group	Criterion variables: Hesitates to confront students	Size of class	Physical punish.	Use of grades as sanction	Educational attainment	Years in school
Pro-integration attitude	F	00	02	-03	-16*	-02	-06
	M	-12*	-09	00	-10	-03	-04
Job satisfaction	F	-18*	-04	-01	-05	00	04
	M	-16	-03	09	-03	00	02
Interaction with students	F	-10*	09	-01	-03	14*	02
	M	-07	06	19*	03	02	-08
Personal security	F	-34*	00	-06	-05	-03	14*
	M	-31*	-01	-07	-13*	-06	10
Classroom orderliness	F	-29*	-05	-09	-10*	02	11*
	M	-22*	01	-04	-07	07	03
Professional development	F	-11*	-09	02	-08	-06	-02
	M	-01	-04	-02	-04	-08	-08
Nonauthoritarian attitude	F	-10*	-02	-25*	-15*	03	-06
	M	-21*	-08	-16*	-16*	00	-02

Note. Decimals omitted. Females shown in the first row, males second row, for each variable. Teachers completed surveys in the Spring of 1983. Lowest pairwise *n* for females = 560. Lowest pairwise *n* for males = 420.
*$p < .01$

completed the ESB and a separate questionnaire developed by local school authorities in the Spring of 1983. Teachers responded to the following four questions in the local questionnaire: "During the 82-83 school year about how frequently did you do each of the following things: (a) Try out a teaching method that was new to you? (b) Try out teaching materials that were new to you? (c) Participate in planning for school improvement? (d) Help to implement a school improvement endeavor?" Each question had a Likert-type response format ranging from "never" (coded 1) to "continually on an ongoing basis" (coded 4). These four questions correspond to the four sets of columns in Table 26. The table shows that Job Satisfaction is Positively associated with participation in planning and implementing school improvement; Interaction with Students is positively correlated with each type of teacher initiative; Professional Development is positively correlated with trying new teaching methods and planning and participating in school improvement efforts; and Nonauthoritarian Attitude is negatively correlated with planning or helping in school improvement efforts. Pro-integration Attitude, Personal Security, and Classroom Orderliness are unrelated to these measures of teacher initiative.

A Summary of the Correlational Evidence

The correlations in Tables 22 through 26 provide insight into the meanings or construct validity of the scales. The following account summarizes these correlations for each ESB teacher scale:

Pro-Integration Attitude. This scale is positively correlated with Job Satisfaction (males), Personal Security (males), and Nonauthoritarian Attitude. It is negatively correlated with hesitation to confront misbehaving students (males) and the lowering of grades as a response to misconduct (females). As expected, black teachers score higher on this scale than do white teachers, and among white teachers the largest correlate of this scale is Nonauthoritarian Attitude (.42). Taken together, these correlations imply that this scale is a measure of positive attitudes toward integrated education and possibly of a liberal outlook on education.

TABLE 25
Correlations Between ESB Measures and Selected Criterion Variables for Black and White Teachers

ESB measure	Group	Criterion variables: Hesitates to confront students	Size of class	Physical punish.	Use of grades as sanction	Educational attainment	Years in school
Pro-integration attitude	B	-01	-05	-04	-11	-03	00
	W	-06	-07	-06	-13*	00	-09
Job satisfaction	B	-18*	-05	02	-07	09	19*
	W	-18*	-04	01	-04	-01	-05
Interaction with students	B	-13	09	04	-03	08	03
	W	-06	10*	09	04	10*	-05
Personal security	B	-33*	-02	-09	-11	11	18*
	W	-32*	-02	-09	-07	-12	06
Classroom orderliness	B	-28*	00	-07	-04	10	12
	W	-21*	-01	-12*	-12*	04	09
Professional development	B	-11	-05	-02	-08	03	03
	W	-04	-11*	-07	-04	-10	-10*
Nonauthoritarian attitude	B	-14*	-06	-21*	-16*	02	04
	W	-12*	-07	-23*	-18*	-01	-07

Note. Decimals omitted. Black teachers shown in the first row, white teachers second row, for each variable. Teachers completed surveys in the Spring of 1983. Lowest pairwise *n* for black teachers = 331. Lowest pairwise *n* for white teachers = 569.
*$p < .01$

TABLE 26
Correlations Between ESB Teacher Scales and Several Measures of Teacher Initiative

Measure	Teaching methods *r*	*n*	Teaching materials *r*	*n*	Planning Improvement *r*	*n*	Helping improvement *r*	*n*
Pro-integration attitude	-.08	137	.02	136	-.11	138	-.11	135
Job satisfaction	.12	139	.01	138	.18*	140	.26**	137
Interaction with students	.23**	137	.29**	136	.32**	138	.32**	134
Personal security	-.10	136	.04	135	.03	137	.02	133
Classroom orderliness	-.02	139	.04	138	.04	139	.06	135
Professional development	.24**	133	.16	133	.25**	133	.23**	130
Nonauthoritarian attitude	-.10	138	-.12	137	-.23**	139	-.26**	137

Note. Teachers completed inventories and a separate questionnaire in the Spring of 1983. Sample consists of teachers from the urbanized portion of a Southern city who taught in one of seven predominantly black schools.
*$p < .0$
**$p < .01$

Job Satisfaction. This scale correlates positively with Pro-integration Attitude (males), Interaction with Students, Personal Security, Classroom Orderliness, Professional Development, and Nonauthoritarian Attitude. It also correlates positively with the extensiveness of teacher involvement in planning for and implementing school improvement efforts in the Southern City sample. The scale correlates negatively with teacher hesitation to confront misbehaving students. Taken together, these correlations support the interpretation of this scale as a global measure of positive perceptions and dispositions toward the teacher's job — incorporating both evaluative aspects and a disposition to participate in a variety of activities related to the teacher role in the school.

Interaction with Students. This scale correlates positively with Job Satisfaction, Classroom Orderliness (females), Professional Development, Nonauthoritarian Attitude (males), teacher educational attainment (females), and threats or use of physical punishment (males). It correlates negatively with hesitation to confront misbehaving students (females). This scale also correlates positively (range of correlations = .23 to .32) with each of four measures of teacher initiative in the urban Southern sample of teachers. This pattern of correlations implies that this scale measures friendly interpersonal behavior with students, although the small correlation (.19) with punitive behaviors among male teachers is discrepant with this interpretation. Because the scale correlates positively with Nonauthoritarian Attitude (an inverse measure of punitive moralism) this unexpected correlation may merely be a chance result.

Personal Security. This scale correlates positively with Pro-integration Attitude (males), Job Satisfaction, Classroom Orderliness, Nonauthoritarian Attitude, and tenure in the current school (females). It correlates negatively with hesitation to confront misbehaving students, and lowering grades in response to student misconduct (males). The largest correlations are with Classroom Orderliness (positive) and hesitation to confront students (negative), lending support to the interpretation of this scale as an inverse measure of victimization in school or a measure of the extent to which teachers are free from indignities, thefts, and threats in interactions with students.

Classroom Orderliness. This scale correlates positively with Job Satisfaction, Interaction with Students (females), Personal Security, Professional Development (females), Nonauthoritarian Attitude, and tenure in the present school (females). It correlates negatively with hesitation to confront misbehaving students and lowering grades in response to student misconduct (females). This pattern of correlations is consistent with the interpretation that this scale measures the extent to which a teacher experiences orderly classroom interactions as opposed to classroom disruption.

Professional Development. This scale correlates positively with Job Satisfaction, Interaction with Students, and Classroom Orderliness (females). The scale correlates negatively with hesitation to confront misbehaving students (females). In the urban Southern sample, there are significant positive correlations with trying new teaching methods, participation in planning for school improvement, and helping to implement school improvement efforts. These correlations support the interpretation that this scale is a measure of the extent to which teachers engage in activities to upgrade, maintain, or improve their job-related competencies.

Nonauthoritarian Attitude. This scale correlates positively with each of the other ESB measures except Interaction with Students (females) and Professional Development. It correlates negatively with hesitation to confront misbehaving students, the threat or use of physical punishment, and lowering grades in response to misconduct. In the Southern urban sample, this scale correlates negatively with participation in ongoing school improvement programs. This pattern of correlations is consistent with the interpretation of this scale as a measure of a propensity to reject punitive moralism and to reject authority as a grounds for judgment or action. For instance, its highest correlations are Pro-integration Attitude (males, .32; females, .28; whites, .42), and it is the highest negative correlate of threatening or using physical punishment (-.25, females). In addition it is moderately correlated (-.23 and -.26) with participation in school improvement programs in the Southern urban sample — where the central school administration was seeking teacher support for a school improvement program of *its* own design. This suggests that low scorers on the scale may be deferent to authority as well as moralistic in their responses to those with less authority.

This chapter has provided a summary of some aspects of the development, reliability, and validity of the measures of teacher characteristics in the ESB. The psychometric properties described in this chapter are important in evaluating the teacher scales, which are used in ESB profiles to describe a school's population of teachers. They are not intended for use in individual assessment, and the information presented in this chapter generally supports the application of these measures for their intended use.

Chapter 6
Measures of School Climate

The assessment of school climates is fundamentally different from the measurement of individuals. Whereas individual differences are the entire point of measurement at the individual level, these differences are "error" or "noise" in the assessment of an environment (Richards, 1978). Earlier chapters describe the psychometric properties of ESB scales measuring student and teacher characteristics. In contrast, this chapter describes two kinds of measures of *schools.*

The first kind is a set *of psychosocial climate* measures. These are measures of the school environment based on the reports of students and teachers *about the environment.* These measures are not intended to measure the characteristics of individuals at all. Instead, they focus on the ways people in the environment typically perceive it and describe it. The development of these scales is described, and evidence about their reliability and validity is presented.

The second kind of measure is a set of *school population* measures. The measures of student and teacher characteristics are averaged (aggregated) to obtain this second kind of school measure called *"population characteristics."* Population profiles in the ESB describe the average person — student or teacher — in a school. Such measures tell us how socially integrated the typical student is or how much job satisfaction the typical teacher shows. The present chapter provides some evidence about the properties of these school population measures. The psychometric evidence presented in this chapter on these population measures are all based on school-level analyses. That is, in contrast to earlier chapters where evidence based on individual-level analyses is reported, this chapter always uses the *school* as the unit of analysis.

Psychosocial vs. Population Climate

This chapter discusses psychosocial climate scales and population measures in turn. The following paragraphs further clarify the distinction between these two approaches to measuring school environments.

Psychosocial climate scales. A useful way to characterize environments is to regard the inhabitants — teachers and students — as informants about the environment. Moos (1973, lnsel & Moos, 1974) has described the measurement of environments using the reports of people in them, and the term "psychosocial climate" is borrowed from him. To construct this kind of climate measure, reports *about the environment* (rather than about the individuals who inhabit it) are used. For psychological climate scales, reports are first averaged, and then item analyses proceed based on school means for the items.

Population climate. Environments can also be characterized by aggregated or averaged characteristics of individuals. The ESB population climate measures are based on such aggregated personal characteristics to describe climates using averaged characteristics of individuals. Moos (1973) refers to this kind of measurement as assessments of the "personal and behavioral characteristics of the milieu inhabitants" (p. 655). For example, Astin and Holland (1961) have used an "Environmental Assessment Technique" to describe college environments by profiling the percentage of students of each of Holland's (1985) six vocational personality types. The ESB reports population climate scores for the students and the teachers who inhabit schools using the measures described in earlier chapters.

The Development of the Psychosocial Climate Scales

The forerunners of the ESB psychosocial climate scales were scales developed in earlier research using the NIE (1978) Safe School Study data to examine the relation of school and community characteristics to school disorder (G. Gottfredson & D. Gottfredson, 1985; Wiatrowski, G. Gottfredson, & Roberts, 1983). Much of the evidence from that research is important in assessing the validity of the current ESB scales. The ESB psychosocial climate scales incorporate improvements over the earlier scales, however, by maintaining a clearer distinction between population measurement and the measurement of psychosocial climate. The development of the ESB psychosocial scales for teachers and students were guided by the earlier research, but only reports about the environment were considered for inclusion in the present scales.

For both student and teacher scales, internal consistency item analyses were performed on school-level aggregate reports about the environment.

These analyses examined sets of items composed on an *a priori* basis or on the basis of earlier exploratory research. This earlier research included (a) research by G. Gottfredson and D. Gottfredson (1985) using survey data collected in 1976 in 642 schools, and (b) exploratory factor analyses of a preliminary version of the ESB administered in 69 schools in 1981.

Decisions about which items to include and what dimensions of psychosocial climate to measure were based on the performance of items in item analyses and on research and speculation about the dimensions of school climate that are related to school orderliness (G. Gottfredson, 1983; G. Gottfredson & D. Gottfredson, 1985).

Climate Scales Based on Student Reports

The following list describes the psychosocial climate measures based on the reports of students:

Safety. This is a 13-item scale asking if students stay away from any of a list of places in the school. It also asks if students feel safe at school, or if they fear someone will hurt them at school or on the way to school. It resembles what was called "School Climate" in the Schools Initiative Evaluation (Grant et al., 1979).

Respect for Students. One theoretical perspective (Greenberg, 1977) assumes that delinquency is in part a result of a special status accorded youth, one which isolates them from meaningful adult roles and subjects them to degrading interpersonal exchanges to which adults would not be subjected. This scale is intended to assess the degree to which students feel that the school environment either degrades them or treats them with dignity. A low score could implies that students feel they are treated in a degrading way; a high score means students are treated with respect. Items include "Students are treated like children here" (-); "Teachers treat students with respect"; and "Teachers do things to make students feel put down" (-).

Planning and Action. This scale is intended to assess, from the point of view of the students, the degree to which schools engage in experimenting and problem-solving, or the degree to which they resist change. It is composed of the following three aggregated items: "It is hard to change the way things are done in this school"; "The teachers and principal in this school make plans to solve problems"; and "This school hardly ever tries anything new."

Fairness. Evidence implies that the degree to which students perceive a school's rules as fair and clear is associated with the degree of orderliness of the school (G. Gottfredson & D. Gottfredson, 1985; NIE, 1978). Consequently, scales designed to assess these constructs were developed. Fairness is a three-item aggregate-level scale based on student reports that the rules are fair, that the punishment for breaking rules is the same for everyone, and that the principal is fair.

Clarity. Intended to measure the clarity of school rules from the point of view of the school's students, this scale is composed of questions asking whether everyone knows what the rules are, whether the principal and teachers let the students know what is expected, and whether the principal is firm.

Student Influence. It is often assumed that student influence on the way a school is run may lead to a number of positive outcomes, and an increase in student participation in planning and decision making is sought in many school improvement programs. This six-item scale is intended to assess how much influence students have in their schools. Sample items include: "Students have little say in how the school is run" (-); "Students have helped to make the school rules"; and "Students are seldom asked to help solve a problem the school is having" (-).

Climate Scales Based on Teacher Reports

An alternative perspective on the climate of a school is provided by the reports of teachers. Accordingly, the ESB contains nine climate scales using averaged teacher reports about their school.

Safety. This 10-item scale measures teachers' perceptions of the safety of their schools. It asks, for example, how safe the classrooms, halls, and restrooms are.

Morale. Anecdotal and correlational evidence suggests that the commitment or morale of an organization's staff is related to project implementation (Berman & McLaughlin, 1976; Grant et al., 1979). Accordingly, morale is expected to be a concomitant of success in implementing innovations, and it is an important characteristic of an organization in its own right. The 11-item scale contains items such as "Our problems in this school are so big that it is unrealistic to expect teachers to make much of a dent in them" and "(Is the teaching faculty) frustrated?"

Planning and Action. Presumably, organizations that engage in systematic planning and that are open to change are most likely to successfully implement innovations. Based on this assumption, the ESB contains a nine-item scale to

assess planning and action. Representative items ask “How often do you work on a planning committee with other teachers?”; “(Is the principal) progressive?”; and “(Is the teaching faculty) open to change?”

Smooth Administration *(Administrative Leadership).* Earlier research (G. Gottfredson & D. Gottfredson, 1985) suggests that the way a school is run is important in understanding its climate and in preventing school disruption. Most detailed studies of school administration tend to focus on the personal characteristics of administrators (e.g., Miner, 1967) or on ethnographic accounts of the typical activities of administrators. Ethnographic study is usually impractical, so the ESB assesses perceptions of administrative style and procedures from the point of view of the body of teachers who experience them. The 12-item Smooth Administration scale contains items such as "Simple, non-time-consuming procedures exist for the acquisition and use of resources"; "There is little teacher-administration tension in this school"; and "(The principal is) open." In a sense, this scale represents a global rating of the positiveness with which teachers view the school's administration, although the item content focuses on both principal behavior and some probable practical consequences of that behavior.

Resources for Instruction. This scale is intended to measure relative levels of resources (equipment, materials, learning opportunities) available in the school. It contains four items asking about teaching supplies, space, extra-school settings used for instruction, and timely availability of resources.

School Race Relations. This brief two-item measure asks about race relations from the teachers' point of view. It asks how well different groups get along.

Involvement of Parents and Community. A goal of many school improvement programs is to increase the use of community and family resources by schools. This scale seeks to assess parent and community involvement according to aggregate teacher reports. It asks about parent influence on policies or practices, direct parent assistance, relations between parents and teachers, and community receptiveness.

Student Influence. Student participation in school decision making is a major element in many approaches to school improvement (e.g., Howard, 1978). The assumption is that student influence will help to create other beneficial organizational changes, or it may contribute to decreased alienation or sense of powerlessness. Measures of student influence used in previous studies (G. Gottfredson & D. Gottfredson, 1985; NIE, 1978) assessed a limited range of influence, were not highly reliable, and certainly did not assess the kinds of student influence possible. Therefore, although based on the scale used earlier by G. Gottfredson and D. Gottfredson 1985), this scale was lengthened to five items. Sample questions are “I often change my lesson plans based on student suggestions” and “Teachers and their students work together to make rules governing behavior in the classroom.”

Use of Grades as a Sanction. The use of grades as a response to misconduct is correlated with school disruption rates (G. Gottfredson & D. Gottfredson, 1985). On the face of it, this also appears to be a poor practice because it makes the grading and sanctioning process ambiguous. A two-item index uses teacher reports to characterize the extent of this practice in schools.

Psychometric Properties

The following paragraphs summarize some evidence about the psychometric properties of both student and teacher psychosocial climate scales.

Single Occasion Reliability of Psychosocial Scales

Homogeneity coefficients for the psychosocial climate scales based on student and teacher report are shown in Tables 27 and 28, respectively. These tables show alpha coefficients calculated from the correlations among items aggregated to the school level. Hence they indicate the ratio of true score variance to total variance in the scales for the measurement of *schools*, following the assumptions of classical true-score theory. The alpha coefficients are calculated for three successive samples in a related group of schools. The number of schools assessed in 1981 ranges from 52 to 65 (not all scales were administered in all schools). The sample of schools is the same as that described in Chapter 4. The 1982 sample contains 65 schools (it excludes the schools described in Chapter 4 located in St. Paul). The 1983 student sample contains 59 schools (it excludes the schools located in East Harlem, several schools in Chicago, and a school in Wisconsin; but it includes the schools in St. Paul). The 1983 sample for teachers contains the same schools as the student sample plus two additional predominantly minority
schools located in Baltimore City (n = 61 schools). The samples differ from year to year due to the

TABLE 27

Homogeneity Coefficients for the Psychosocial Climate Scales Based on Student Report and Number of Items in Each Scale

Scale	1981 alpha	1982 alpha	1983 alpha	Number of items
Safety	.92	.94	.90	13
Respect for students	.78	.85	.82	3
Planning and action	.65	.84	.83	3
Fairness of rules	.62	.76	.76	3
Clarity of rules	.64	.67	.71	4
Student influence	.62[a]	.74[a]	.70	5

[a] The reliabilities for the Student Influence Scale shown for 1981 and 1982 data are based on a six-item scale. A relatively weak item was deleted in the 1983 version of this scale, resulting in a five-item scale.

TABLE 28

Homogeneity Coefficients for the Psychosocial Climate Scales Based on Teacher Report and Number of Items in Each Scale

Scale	1981 alpha	1982 alpha	Number of items
Safety	—[a]	.94	10
Morale	.90	.94	11
Planning and action	.87	.89	9
Smooth administration	.92	.93	12
Resources for instruction	.86	.81	4
Race relations	.77	.74	2
Parent and community involvement	.80	.81	6
Student influence	.81	.85	5
Avoidance of grades as sanction	.84	.65	2

[a] The reliability of the Teacher Safety Scale was not calculated in the 1981 data.

administration of somewhat different forms in different schools and because data from some schools were not available in time to be used in the analyses.

The internal consistency estimates for the psychosocial climate scales based on student reports (Table 2 7) range from moderate to very high (. 70 to. 90 in the 1983 estimates). The internal consistency estimates of the psychosocial climate scales based on teacher reports (Table 28) range from adequate (.65) to excellent (.94). The lowest homogeneity coefficient (.65 for Avoidance of Grades as a Sanction in 1982) is lower than the estimate for this same scale based on 1981 data (.84).

TABLE 29

One- and Two-Year Stability Coefficients for ESB Population Climate Measures

Population characteristic	One-Year		Two-Year	
	r	*n*	*r*	*n*
Students				
Parental education	.95	48	.89	35
Positive peer associations	.82	48	.82	50
Educational expectation	.88	52	.73	50
Social integration	.50	52	.52	50
Attachment to school	.83	52	.72	50
Belief in conventional rules	.59	52	.50	50
Interpersonal competency	.77	52	.53	44
Involvement	.86	52	.65	44
Positive self-concept	.77	52	.65	50
School effort	.77	52	.31[a]	40
Avoidance of punishment	.81	52	.78	50
School rewards	.88	52	.76	50
Invalidity	.68	52	.62	50
Teachers				
Pro-integration attitude	.39	52	.64	38
Job satisfaction	.66	52	.41	38
Interaction with students	.60	52	.71	38
Personal security	.36	49	.19[a]	37
Classroom orderliness	.46	52	.43	38
Professional development	.47	52	.62	38
Nonauthoritarian attitude	.31	52	.47	38

Note. *N* refers to number of schools. One-year stability coefficients are for schools assessed in the Spring of 1982 and Spring of 1983. Two-year stability coefficients are for schools assessed in the Spring of 1981 and again in the Spring of 1983.

[a] These correlations are not significant. All other correlations are significant at the $p < .01$ level.

TABLE 30

One- and Two-Year Stability Coefficients for ESB Psychosocial Climate Measures

Climate scale	One-Year		Two-Year	
	r	*n*	*r*	*n*
Student reports				
Safety	.84	52	.76	34
Respect for students	.82	52	.83	41
Planning and action	.75	52	.68	40
Fairness of rules	.70	52	.68	46
Clarity of rules	.62	52	.55	46
Student influence	.84	52	.81	40
Teacher reports				
Safety	.75	46	.51	35
Morale	.62	51	.65	37
Planning and action	.51	51	.33	50
Smooth administration	.56	51	.55	37
Resources for instruction	.72	52	.76	38
Race relations	.69	48	.60	33
Parent and community involvement	.53	52	.17[a]	38
Student influence	.59	52	.76	38
Avoidance of grades as sanction	.45	52	.28	38[a]

Note. *N* refers to number of schools. One-year stability coefficients are for schools assessed in the Spring of 1982 and Spring of 1983. Two-year stability coefficients are for schools assessed in the Spring of 1981 and again in the Spring of 1983.

[a] These correlations are not significant.

Stability of Climate and Population Measures

One- and two-year stability coefficients (correlations between corresponding ESB measures over one-and two-year intervals) are shown in Table 29 for population climate and Table 30 for psychosocial climate. These correlations are derived from the samples of schools described in the preceding section.

Population characteristics. The characteristics of the students who compose a school's population appear relatively stable. The median one-year stability coefficient for measures of studentry characteristics is .79, and these coefficients range from a low of .50 (Social Integration) to a high of .95 (Parental Education). Two-year stability coefficients are generally somewhat lower than one-year coefficients, as expected. A few exceptions to this pattern of lower stabilities over longer time occur, and these may be associated with fluctuations in the samples.

The teacher characteristics are less stable across time than are student characteristics. This outcome may simply result from the assessment of smaller numbers of teachers than of students. The median stability coefficient for measures of teacher characteristics is .46, and these coefficients range from a low of .31 (Nonauthoritarian Attitude) to a high of .66 (Job Satisfaction). The sample of schools where teacher surveys were conducted in 1981 is smaller than the samples surveyed in 1982 and 1983 (no surveys were conducted in New Jersey or Minnesota), and the one- and two-year stability coefficients are probably not directly comparable.

Psychosocial climate. Psychosocial climates are also rather stable over time (Table 30). Measures of psychosocial climate based on *student* reports have a median stability coefficient of .82 over a one-year interval and .76 over a two-year interval. Clarity of Rules is least stable (.62 and .55 over one and two years, respectively). Measures of psychosocial climate based on *teacher* reports are less stable than climate measures based on student reports; they have a median stability coefficient of. 59 over a one-year interval and .55 over a two-year interval.

The relatively high correlations over time for these psychosocial climate measures imply that relatively stable characteristics of school environments are being measured. The correlations are not so high that they suggest that these environmental characteristics are immutable. Stability over time may occur because (a) an aspect of the climate is difficult to change, or (b) nothing is being done to change the climate.

The stability coefficients shown in Tables 29 and 30 are sometimes larger than the homogeneity coefficients presented earlier. This occurs because the homogeneity coefficients are conservative estimates made by conventional methods, which usually underestimate reliability. The climate measures are based on aggregations (means) that are stable (have small standard errors) when based on large samples of teachers and students. It is expected that were reliability coefficients calculated by using the Spearman-Brown prophesy formula with climate scores based on random half samples of students, the resulting estimates would imply substantially greater reliability than the alpha estimates.

Mean scores for schools over time. The stability coefficients just presented summarize information about the extent to which schools maintain their rank order on the climate measures of the ESB over time. Related information is presented in Tables 31 and 32. These tables show means and standard deviations for schools in which scores on all measures were available from assessments conducted in the Spring of 1982 and 1983. These tables imply that the means for a sample of schools change little over time. An exception to this generalization of stability is for the Parental Education measure, where the difference is about two-fifths of a standard deviation. But this difference is probably due to a revision in the scoring formula for this measure — missing values were allowed in the 1982 scoring and this procedure was abandoned in 1983.

Validity of Climate Measures

Evidence useful for forming judgments about the validity of the psychosocial climate measures comes from (a) judgments about the content of the items forming each scale, (b) evidence of changes in school climate resulting from programmatic efforts to bring about such changes, (c) evidence from previous research using these or related scales, and (d) evidence about the correlates of the climate scales. Readers can examine the content of the psychosocial climate measures in Appendix 3. Evidence of climate changes associated with a school improvement effort is presented in Chapter 8. Evidence about the behavior of some closely related measures in previous research is reported by G. Gottfredson and D. Gottfredson (1985), and by Wiatrowski et al. (1983); additional evidence derived from closely related measures is also presented in Chapter 7. This section presents some evidence useful in evaluating

TABLE 31

ESB Population Measures for a Single Sample of Schools Assessed in 1982 and 1983

	1982		1983	
Population characteristic	***M***	***SD***	***M***	***SD***
Students (n = 39 schools)				
Parental education	2.13	.56	1.92	.53
Positive peer associations	.78	.04	.79	.05
Educational expectation	3.27	.42	3.32	.40
Social integration	.63	.05	.63	.05
Attachment to school	.68	.08	.70	.07
Belief in conventional rules	.68	.04	.70	.05
Interpersonal competency	.77	.06	.77	.04
Involvement	.22	.04	.21	.04
Positive self-concept	.74	.05	.74	.04
School effort	.61	.05	.62	.05
Avoidance of punishment	.79	.07	.79	.07
School rewards	.27	.07	.27	.08
Invalidity	.18	.06	.16	.04
Teachers (n = 49 schools)				
Pro-integration attitude	3.03	.27	3.04	.24
job satisfaction	2.82	.21	2.86	.24
Interaction with students	2.27	.26	2.21	.32
Personal security	.86	.06	.88	.06
Classroom orderliness	2.70	.32	2.77	.30
Professional development	1.52	.13	1.51	.13
Nonauthoritarian attitude	2.61	.30	2.70	.34

TABLE 32

Psychosocial Climate Scales for a Single Sample of Schools Assessed in 1982 and 1983

	1982		1983	
Climate scale	***M***	***SD***	***M***	***SD***
Student reports (n = 43 schools)				
Safety	.76	.08	.77	.07
Respect for students	1.08	.14	1.08	.14
Planning and action	.50	.07	.50	.06
Fairness of rules	.63	.08	.63	.08
Clarity of rules	.72	.05	.74	06
Student influence	.38	.07	.38	06
Teacher reports (n = 41 schools)				
Safety	3.62	.42	3.71	.43
Morale	1.58	.15	1.57	.16
Planning and action	1.57	.14	1.55	.11
Smooth administration	1.66	.15	1.67	.15
Resources for instruction	2.59	.44	2.53	.45
Good race relations	1.46	.18	1.46	.23
Parent and community involvement	1.27	.11	1.27	.11
Student influence	1.47	.14	1.43	.14
Avoidance of grades as sanction	1.84	.09	1.85	.09

the construct validity of the psychosocial climate measures by showing how each of these measures correlates with other information about schools.

Relations Among the Scales

Correlations among the psychosocial climate scales are shown in Tables 33 and 34. Table 33 shows correlations among the student scales; Table 34 shows correlations among the teacher scales. In each table the correlations shown above the diagonal are for schools assessed in 1982, and those below the diagonal area for schools assessed in 1983. As is typical of correlations based on highly aggregated data, the correlations among these climate scales are

TABLE 33
Correlations Among Student Psychosocial Climate Scales

Climate scale	1 S	2 RS	3 PA	4 FR	5 CR	6 SI
Safety (S)	—	-10	-20	-24	-14	-36
Respect for students (RS)	-16	—	63*	68*	22	67*
Planning and action (PA)	-10	67*	—	71*	34	70*
Fairness of rules (FR)	-18	72*	61*	—	49*	49*
Clarity of rules (CR)	-20	40*	46*	43*	—	16
Student influence (SI)	-33	69*	65*	52*	39*	—

Note. Decimals omitted. Correlations above the diagonal are based on 43 schools assessed in 1983. Correlations below the diagonal are based on 44 schools assessed in 1982.
*$p < .01$

often substantial in size. Nevertheless, in every case the correlations among different scales are substantially smaller than the estimated correlation of the scale score with its own true score. (Readers can compare the square roots of the homogeneity coefficients presented earlier with the correlations in these tables.)

In Table 33, the Safety scale based on student reports is largely independent of the other student climate measures. The other psychosocial scales based on student reports are moderately intercorrelated. In particular, Respect for Students, Fairness of Rules, Student Influence, and Planning and Action have modest to high positive correlations with each other.

The correlations among measures of psychosocial climate based on teacher report, shown in Table 34, also imply that these climate scales are moderately to substantially intercorrelated. Teacher reports of Smooth Administration, Planning and Action, and Morale are especially highly correlated. The Avoidance of Grades as a Sanction scale is largely independent of other scales, and Student Influence is only moderately correlated with the other scales.

Relations Among Different Groups of Measures

One way of assessing the validity of the ESB psychosocial climate measures is to examine the correlations of psychosocial scales based on student reports with the psychosocial climate scales based on teacher reports, because some degree of convergence is expected in the portraits of a school based on these two sources of information. In addition, the correlations of the psychosocial climate scales with characteristics of school population can also provide insight into the ways a school's composition may influence psychosocial climate. Finally, correlations of ESB measures with other information about schools add additional information useful in interpreting the ESB measures. This subsection presents information of these kinds.

The correlations between student and teacher psychosocial climate scales are shown in Table 35. Eighty-three percent of the correlations (and all of the significant correlations) are positive. This outcome is expected because each scale in both sets is scored so that a high score reflects a desirable psychosocial climate. Teacher reports of school safety correlate .43 with student reports of school

TABLE 34
Correlations Among Teacher Psychosocial Climate Scales

Climate scales	1 S	2 M	3 PA	4 SA	5 RI	6 RR	7 PCI	8 SI	9 AGS
Safety (S)	—	63*	49*	40*	56*	44*	29	25	09
Morale (M)	63*	—	69*	75*	24	39*	62*	36	16
Planning and action (PA)	32	78*	—	63*	20	32	41*	53*	31
Smooth administration (SA)	54*	85*	73*	—	21	21	49*	32	21
Resources for instruction (RI)	37*	45*	52*	43*	—	10	25	22	23
Race relations (RR)	35	45*	28	35	02	—	29	07	13
Parent and community involvement (PCI)	41*	66*	58*	62*	28	28	—	35	23
Student influence (SI)	27	50*	51*	45*	22	31	20	—	11
Avoidance of %trades as sanction (AGS)	24	36	10	21	-11	38*	15	35	—

Note. Decimals omitted. Correlations for schools assessed in 1983 ($n = 43$) are shown above the diagonal. Correlations for schools assessed in 1982 ($n = 47$) are shown below the diagonal.
*$p < .01$

TABLE 35

Correlations Between Teacher Psychosocial Climate Scales and Student Psychosocial Climate Scales

(*n* = 40 Schools)

Teacher psychosocial climate scale	Student psychosocial climate scale					
	Safety	**Respect for students**	**Planning and action**	**Fairness of rules**	**Clarity of rules**	**Student influence**
Safety	43*	-15	-12	00	21	-27
Morale	37	23	30	37	46*	-02
Planning and action	30	45*	47*	46*	51*	16
Smooth administration	27	20	33	38	46*	03
Resources for instruction	43*	-04	01	05	11	-36
Race relations	09	19	-03	12	12	-02
Parent and community involvement	27	06	25	13	28	02
Student influence	29	55*	59*	54*	47*	39
Avoidance of grades as sanction	06	14	03	15	11	10

Note. Decimals omitted. Correlations of greater than .31 are significant at the .05 level. Schools assessed in 1982.
*$p < .01$

TABLE 36

Correlations Between Teacher Psychosocial Climate Scales and Measures of Teacher Population

(*n* = 45 Schools)

Psychosocial climate scale	Teacher population characteristic						
	Pro-integration attitude	**Job satis-faction**	**Interaction with students**	**Personal security**	**Classroom orderliness**	**Professional development**	**Nonau-thoritarian attitude**
Safety	03	40*	05	55*	33	33	12
Morale	21	68*	31	65*	37	65*	46*
Planning and action	38*	54*	36	52*	34	60*	43*
Smooth administration	27	50*	20	47*	25	49*	33
Resources for instruction	10	23	09	33	12	24	20
Race relations	07	49*	23	37	31	32	20
Parental and community involvement	12	48*	30	57*	29	37	36
Student influence	35	56*	60*	21	16	47*	53*
Avoidance of grades as sanction	27	42*	38*	28	12	39*	28

Note. Decimals omitted. Schools assessed in 1982.
*$p < .01$

safety. Teacher Morale is positively correlated with student reports of rule clarity. The teacher Planning and Action scale is positively correlated with several student scales: Respect for Students (.45), Planning and Action (.47), Fairness of Rules (.46), and Clarity of Rules (.51). The teacher Student Influence scale is also positively correlated with several student scales: Respect for Students (.55), Planning and Action (.59), Fairness of Rules (.54), and Clarity of Rules (.47). In contrast, the student Student Influence scale has no large correlations with any teacher scale, although the largest correlate is the teacher Student Influence scale (.39, $p < .05$).

Correlations between the teacher psychosocial scales and measures of teacher population are shown in Table 36. As expected, the Safety psychosocial climate scale correlates substantially (.55) with the average Personal Security of teachers in the school. Morale correlates .68 with average teacher job Satisfaction. Planning and Action correlates .60 with average teacher Professional Development. Smooth Administration correlates .50 with average teacher Job Satisfaction. Resources for Instruction has no large correlations with any measure of teacher population. Race Relations correlates .49 with average Job Satisfaction. Parental and Community Involvement correlates .57 with average Personal Security. Student Influence correlates .60 with average teacher Interaction with Students, and Avoidance of Grades as a Sanction correlates .42 with Job Satisfaction. In general, these and other significant correlations shown in Table 35 appear sensible. For example, it appears reasonable to expect that the extent to which the average teacher engages in continuing professional development activities would be related positively to a variety of aspects of school psychosocial climate. The Professional Development measure correlates positively and significantly with every psychosocial climate scale except Resources for Instruction.

Correlations between the teacher psychosocial climate scales and measures of student population are shown in Table 37. These correlations are generally lower than the corresponding correlations with teacher population measures, as is to be expected. Nevertheless, all the significant correlations ($p < .05$) are positive. The Planning and Action and Student Influence psychosocial climate scales based on teacher report have the largest numbers of sizable correlations with student population characteristics. Higher Planning and Action scores and higher Student Influence Scores go with high scores for average student Positive Peer Associations, Social Integration, Attachment to School, and Belief in Conventional Social Rules.

Correlations of the ESB measures based on teacher reports with several external criteria are reported in Table 38. The criterion variables examined are: (a) Percentage of the school's students who are black; (b) average student victimization, which was measured using items very similar to those contained in the teacher Personal Security scale but scored in the opposite direction; (c) percentage of the school's students who are female; (d) mean student age; (e) mean student grade level; (f) school size; (g) low average teacher expectations for their students, measured by a two-item composite in which teachers reported the percentages of their students whom they regard as low in ability or as troublemakers; (h) percentage of the school's teachers who are black; and (i) average level of teacher education, where a B.A. degree or lower earns a low score and a doctoral degree earns a high score. The teacher psychosocial climate scales are independent of a school's racial composition — the highest correlation between the percentage of students who are black and any psychosocial climate scale is -.11 (n.s.). The only correlation of psychosocial climate scales with these external criteria significant at the .01 level is the correlation between Student Influence and the student victimization index (-.47). Several of the teacher population measures are more strongly correlated with these external criteria. Average teacher Job Satisfaction is negatively correlated with the low expectations index (-.56), average teacher Interaction with Students is negatively correlated with average student victimization (-.49) and with low expectations (-.51). Average Personal Security correlates -.57 with low expectations. Average Classroom Orderliness correlates -.68 with average student victimization,.72 with mean student age, .74

TABLE 37
Correlations Between Measures of Student Population and Measures of Teacher Psychosocial Climate
(*N* = 36 Schools)

	Teacher psychosocial climate scale								
Student population characteristic	**Safety**	**Morale**	**Planning and action**	**Smooth admin.**	**Resources for instruction**	**Race relations**	**Parent/ cmty in-volvement**	**Student influence**	**Avoidance of grades as sanction**
Parental education	-07	-15	-05	-18	35	-05	-11	-17	-17
Positive peer associations	00	37	50*	25	-14	28	21	68*	24
Educational expectations	-07	-13	01	-13	26	-07	-10	03	-12
Social integration	22	42	46*	26	20	13	18	65*	27
Attachment to school	07	37	44*	31	-05	-01	25	58*	15
Belief in conventional rules	11	38	52*	25	34	46*	12	66*	05
Interpersonal competency	02	08	00	-02	16	01	00	28	-03
Involvement	28	34	31	28	10	11	41	14	-02
Positive self-concept	00	14	26	-01	40	-04	07	25	-21
School effort	12	30	22	05	21	00	-04	32	21
Avoidance of punishment	-11	08	06	-01	00	10	-07	36	18
School rewards	-13	-01	10	10	-28	-30	11	08	-09
Invalidity	-36	-21	-07	-12	-29	-17	-12	- 22	-14

Note. Decimals omitted. Schools assessed in 1982. Correlations of .33 or greater are significant at the $p < .05$ level.
*$p < .01$

TABLE 38

Correlations of Teacher Psychosocial Scales and Population Measures with School Criterion Variables

(*N* = 36 Schools)

ESB teacher scale or population measure	School's students						School's teachers		
	% Black	Victim-ization	% Female	Mean age	Grade level	School size	Low expec-tations	% Black	Educ. attain-ment
Psychosocial climate									
Safety	05	01	08	-05	-01	-08	-42	16	-30
Morale	-02	-21	18	05	08	-10	-39	07	-38
Planning and action	04	-20	19	11	13	-13	-20	-02	-42
Smooth administration	-08	01	22	05	06	-22	-27	-08	-26
Resources for instruction	-04	10	38	16	19	11	-19	00	-10
Race relations	-11	-16	-06	02	03	-31	-25	01	-30
Parent and community involvement	04	-06	25	-12	-08	-07	-37	04	09
Student Influence	10	-47*	17	30	32	01	-20	19	-32
Avoidance of grades as sanction	-01	-34	-32	-05	-05	-24	-29	12	-06
Population characteristic									
Pro-integration attitude	00	-10	16	01	-01	-20	00	-12	-05
Job satisfaction	05	-40	12	18	22	02	-56*	20	-24
Interaction with students	-06	-49*	31	37	40	15	-51*	06	-09
Personal security	-15	-32	08	20	25	16	-57*	02	-40
Classroom orderliness	-21	-68*	06	72*	74*	29	-70*	-03	-31
Professional development	34	-18	-02	-02	-03	-19	00	40	-46*
Nonauthoritarian attitude	-34	-35	18	22	22	06	- 39	-27	02

Note. Decimals omitted. Schools assessed in 1982. Correlations of .34 or greater are significant at the $p < .05$ level.
*$p < .01$

with mean student grade level, and -.70 with low expectations. Average teacher Professional Development correlates -.46 with average teacher educational attainment. (In schools where teachers already have more credentials, the average teacher engages in fewer development activities.)

Table 39 shows correlations between the two sets of measures based on student reports — the psychosocial climate scales and the measures of student population. Some of these correlations are substantial. Although most of the significant correlations in Table 38 appear predictable, some unexpected correlations do appear. For example, it appears sensible that average student Attachment to School is positively and substantially correlated with five of the six measures of psychosocial climate. But the negative correlations between average students' Parental Education and Respect for Students (-. 46) and Student Influence (-.47) are surprising. These correlations suggest that students in more highly educated communities may expect more dignified treatment and more influence over their school environment than they observe — an expectation that produces the inverse correlations. The two significant correlations for average Invalidity with psychosocial climate scales are also somewhat surprising. The large negative correlation (-.73) between Safety and average Invalidity suggests that schools may be perceived as relatively unsafe when large proportions of students feel free to goof around, but the interpretation of this correlation and the moderate correlation between average Invalidity and Student Influence are ambiguous.

In summary, although most of the correlations in this table appear rational, enough irregularities occur to suggest caution in interpreting aggregated individual measures as measures of school climate. The hazards in interpreting ecological correlations as if they were measures of individuals have long been recognized (Robinson, 1950), and the term "ecological fallacy" has been applied to the misinterpretation of such correlations. It may be, as Richards (1978) has suggested, that a "psychological fallacy" is involved in the interpretation of individual measures as if they characterized environments. In any event, the information presented in Table 39 suggests that it is best to interpret the psychosocial scales as measures of the school environment and to interpret the population measures as averaged characteristics of a school's students.

Correlations between the student psychosocial climate scales and the measures of teacher population are shown in Table 40. Again, all the significant ($p < .05$) correlations are positive. The largest correlations of the student Safety scale are with

TABLE 39

Correlations Between Measures of Student Population and Student Psychosocial Climate Scales

(*N* = 40 Schools)

Student population characteristic	Student psychosocial climate scale					
	Safety	Respect for students	Planning and action	Fairness of rules	Clarity of rules	Student influence
Parental education	08	- 46*	-38	-27	-18	-47*
Positive peer associations	-08	76*	62*	71*	63*	63*
Educational expectation	25	-27	-25	-11	-19	-36
Social integration	55*	44*	40	39	20	20
Attachment to school	-18	82*	79*	76*	59*	65*
Belief in conventional rules	43*	47*	16	36	25	10
Interpersonal competency	35	02	-04	01	00	-14
Involvement	-19	06	30	05	46*	15
Positive self-concept	08	03	02	08	27	-12
School effort	08	-01	10	26	18	-07
Avoidance of punishment	26	56*	23	30	-07	19
School rewards	-65*	27	63*	37	48*	54*
Invalidity	-73*	20	34	15	10	44*

Note. Decimals omitted. Schools assessed in 1982.

*$p < .01$

TABLE 40

Correlations Between Student Psychosocial Climate Scales and Measures of Teacher Population

(*N* = 43 Schools)

Student psychosocial climate scale	Pro-integration attitude	Job satisfaction	Interaction with students	Personal security	Classroom orderliness	Professional development	Nonauthoritarian attitude
Safety	-20	23	28	45*	53*	08	17
Respect for students	41*	35	30	24	40*	15	23
Planning and action	14	17	12	15	-04	16	22
Fairness of rules	24	38	08	22	21	06	09
Clarity of rules	33	24	13	23	00	37	-06
Student influence	34	09	21	08	03	20	14

Note. Decimals omitted. Schools assessed in 1982. Correlations of .31 or larger are significant at the $p < .05$ level.

*$p < .01$

average teacher Personal Security (.45) and average teacher classroom orderliness (.53), lending support to the construct validity of this scale. Respect for Students correlates .41 with average teacher Pro-integration Attitude and .40 with average Classroom Orderliness. None of the correlations shown in Table 40 is unexpected.

Correlations of the student psychosocial climate and population measures with several criterion measures are shown in Table 41. These criterion measures are the same as those described earlier for Table 38. The correlations of the Safety scale with these criterion measures show a sensible pattern: -.44 with average student victimization, .51 with mean student age, .56 with mean grade level, and -.64 with low expectations. All psychosocial climate measures except Clarity of Rules are significantly ($p < .05$) correlated with average student victimization. Respect for Students is low in schools where the average student victimization is high, and high in schools with older students ($p < .05$) and in schools

with higher grade levels ($p < .05$). Rule clarity correlates positively with percentage of students who are black (.38, $p < .05$) and percentage of teachers who are black (.36, $p < .05$).

The correlations of student population characteristics with the criterion measures are more difficult to interpret. Eight of the 14 student population measures are significantly correlated with percentage of the school's students who are black. Most of the correlations of the student population measures with average student victimization appear predictable. Average victimization is negatively correlated with Positive Peer Association, Social Integration, Attachment to School, Belief in Rules, and Avoidance of Punishment. The positive correlation of average student victimization with Parental Education is, however, unexpected. Other correlations shown in Table 41 imply that Belief in Conventional Rules tends to be higher in schools with older students or students in higher grades, and that students in schools with higher grade levels are punished less and rewarded less than students in schools with lower grade levels or younger students. The correlations of percentage of teachers who are black resemble those for percentage of students who are black, probably because schools with mostly black students also tend to have more black teachers.

For completeness, Tables 42, 43, and 44 show correlations among the measures of teacher population, correlations among the measures of student population, and correlations of measures of student population with measures of teacher population. Because issues of construct validity for these averaged student and teacher characteristics involve individual-level correlations, which were discussed earlier, these tables will not be discussed in detail. Readers who examine these tables are reminded that these are correlations among school averages of individual measures, and should not be interpreted as correlations among measures of the

TABLE 41
Correlations of Student Psychosocial Scales and Population Measures with School Criterion Variables
(*N* = 36 Schools)

ESB student scale or population measure	School's students						School's teachers		
	% Black	Victim-ization	% female	Mean age	Grade level	School size	Low expec-tations	% Black	Educ. attain-ment
Psychosocial climate									
Safety	-20	-44*	06	51*	56*	21	-64*	-15	-19
Respect for students	02	-59*	-01	42	40	04	02	11	-21
Planning and action	16	-34	-04	06	07	-04	24	16	-21
Fairness of rules	10	-38	-04	16	17	00	02	11	-10
Clarity of rules	38	-03	14	-09	-10	-24	18	36	-23
Student influence	14	-39	-15	18	17	-05	20	21	-22
Population characteristic									
Parental education	36	43*	04	-34	-31	-08	13	16	39
Positive peer associations	27	-50*	01	24	23	-06	05	28	-16
Educational expectations	02	13	-02	-12	-08	03	-05	-16	38
Social integration	26	-56*	05	42	47*	13	-31	33	-31
Attachment to school	45*	-44*	-02	27	28	02	02	51*	-09
Belief in conventional rules	-16	-57*	16	48*	49*	04	-26	-08	-29
Interpersonal competency	43*	-22	08	38	42	28	-33	46*	37
Involvement	66*	33	22	-30	28	-18	20	57*	-19
Positive self-concept	78*	-02	18	13	16	09	-06	69*	31
School effort	60*	-06	02	-06	-02	02	-03	62*	02
Avoidance of punishment	-43*	-78*	-04	68*	65*	29	-35	-27	-17
School rewards	40	28	-02	-43*	-46*	-35	65*	25	-01
Invalidity	-08	31	-02	-40	-44*	-24	59*	-11	-25

Note. Decimals omitted. Schools assessed in 1982. Correlations of .34 or greater are significant at the $p < .05$ level.
*$p < .01$

TABLE 42

Correlations Among ESB Measures of Teacher Population
(*N* = 52 Schools)

Population characteristic	1 PI	2 JS	3 IS	4 PS	5 CO	6 PD	7 NA
Pro-integration attitude (PI)	—	04	19	-10	08	13	07
Job satisfaction (JS)		—	68*	33	42*	43*	17
Interaction with students (IS)			—	30	35	92*	49*
Personal security (PS)				—	46*	40*	31
Classroom orderliness (CO)					—	46*	32
Professional development (PD)						—	45*
Nonauthoritarian attitude (NA)							—

Note. Decimals omitted. Schools assessed in 1983.
*$p < .01$

characteristics of individuals. These tables illustrate that a knowledge of the average characteristics of a school's teachers or students on one dimension often enables relatively efficient predictions of other average population characteristics.

Standard Errors

Persons interpreting the ESB psychosocial climate scales need guidelines for assessing the likely margin of error in any given score in a variety of interpretive contexts. To meet this need, Table 45 was prepared. This table shows estimated standard errors of measurement for the psychosocial climate scales, and estimated standard errors of differences for these scales over one- and two-year intervals. These approximations are useful in guarding against the overinterpretation of small differences.

The standard error of measurement enables users to construct confidence intervals around a score. For example, using the information in the second column of Table 45, one can calculate that an approximate 95% confidence interval around a student Safety

TABLE 43

Correlations Among ESB Measures of Student Population
(*n* = 52 Schools)

Population characteristic	1 PE	2 PPA	3 EE	4 SI	5 AS	6 BCR	7 IC	8 Inv	9 PSC	10 SE	11 AP	12 SR	13 Iy
1. Parental education (PE)	—	−19	69*	−04	−33	−05	21	08	24	20	−39*	−35	−59*
2. Positive peer associations (PPA)		—	16	23	50*	43*	16	19	38*	54*	19	17	40*
3. Educational expectation (EE)			—	−26	−32	05	09	09	25	44*	−29	−16	−31
4. Social integration (SI)				—	72*	72*	43*	−06	17	−03	41*	−07	−20
5. Attachment to school (AS)					—	56*	46*	16	43*	17	40*	37*	18
6. Belief in conventional rules (BCR)						—	31	−27	08	03	65*	−22	−13
7. Interpersonal competency (IC)							—	−05	66*	23	23	−10	−48*
8. Involvement (Inv)								—	43*	40*	−28	33	12
9. Positive self-concept (PSC)									—	61*	−13	21	−16
10. School effort (SE)										—	−22	12	03
11. Avoidance of punishment (AP)											—	−17	05
12. School rewards (SR)												—	46*
13. Invalidity (Iy)													—

Note. Schools assessed in the Spring of 1983. Decimals omitted. Correlations larger than .27 are significant at the $p < .05$ level.
*$p < .01$

TABLE 44

Correlations Between Measures of student Population and Measures of Teacher Population
(*n* = 39 Schools)

Student population characteristic	Teacher Population characteristic						
	Pro-integration attitude	Job satisfaction	Interaction with students	Personal security	Classroom orderliness	Professional development	Nonauthoritarian attitude
Parental education	-11	-21	-29	-28	- 30	-02	- 22
Positive peer associations	40	39	36	27	28	34	08
Educational expectation	-04	-24	-21	-22	-15	-18	-11
Social integration	-01	43*	34	56*	46*	18	24
Attachment to school	26	42*	27	30	33	32	02
Belief in conventional rules	27	42*	47*	38	48*	08	31
Interpersonal competency	-20	19	02	02	36	19	-26
Involvement	-01	16	-01	24	-14	44*	-27
Positive self-concept	-03	28	06	-01	22	48*	-36
School effort	-28	30	-14	12	05	48*	-26
Avoidance of punishment	06	24	35	17	50*	-13	40
School rewards	09	-08	-22	-23	-44*	18	-12
Invalidity	16	-21	-13	-22	-45*	-11	10

Note. Decimals omitted. Schools assessed in 1982. Correlations of .32 or greater are significant at the $p < .05$ level.
*$p < .01$

TABLE 45

Standard Deviations, Standard Errors of Measurement, and Standard Errors of Difference Scores for Psychosocial Climate Scales Administered One and Two Years Apart

Climate scale	*SD*	*SEM*	SED_1	SED_2
Student reports				
Safety	.08	.023	.056	.046
Respect for students	.16	.068	.160	.160
Planning and action	.10	.041	.082	.073
Fairness of rules	.09	.044	.080	.078
Clarity of rules	.06	.034	.056	.051
Student influence	.10	.055	.100	.100
Teacher reports				
Safety	.42	.103	.206	.147
Morale	.16	.045	.073	.073
Planning and action	.12	.042	.059	.051
Smooth administration	.15	.042	.064	.063
Resources for instruction	.44	.176	.333	.333
Race relations	.20	.098	.176	.155
Parent and community involvement	.11	.049	.072	.054
Student influence	.14	.058	.090	.090
Avoidance of grades as sanction	.09	.046	.062	.054

Note. Standard errors of differences were estimated by subjecting the data to some constraints. Specifically, retest correlations were not allowed to exceed homogeneity coefficients, and two-year retest correlations were not allowed to exceed one-year correlations. The values used for standard deviations were values halfway between the standard deviations estimated in 1981 and 1982 surveys. The values used for homogeneities were median values from among those estimated in 1981, 1982, and 1983.

score of .75 is .70 through .80 (.75+/- [1.96 x .023]).[FN] The standard errors of differences between the same scale in administrations one and two years apart shown in the last two columns of Table 45 are useful in judging whether a difference could easily have arisen by chance or is large enough to warrant interpretation. Critical values for differences based on these standard errors of measurement are provided in a table in Chapter 8.

The values shown in Table 45 were arrived at in the following manner: The standard deviations of the scales were assumed to be equal to middle values of the two estimates of the standard deviations shown in Table 32. Homogeneity coefficients were assumed to be equal to the median of three estimates made from 1981, 1982, and 1983 surveys. Retest correlations were taken from Table 30. In performing the calculations, several assumptions and compromises were made. First, it was assumed that the standard deviation is a constant, i.e., the same from year to year. Second, it was assumed that homogeneity is a constant, the same from year to year. Third, retest correlations were not allowed to exceed homogeneity coefficients. Fourth, two-year retest correlations were not allowed to exceed one-year retest correlations. The formula used for the standard error of differences across time is the following: $SED = SX\ (1 - [r_{TX}^{2} - r_{XX}] / [1 - r_{XX}])^{1/2}$ where r_{TX}^{2} is the homogeneity coefficient and r_{xx} is the retest correlation. The values shown in Table 45 arc conservative approximations. They are intended to be useful in practical application when profiles are interpreted. Researchers evaluating school improvement programs can use appropriate alternative statistical procedures rather than these rough interpretive guidelines.

When examining differences in population characteristics over time, use should be made of appropriate standard errors of means based on observed standard deviations and sample sizes.

Summary

This chapter has described the research leading to the development of the ESB's psychosocial climate scales; presented evidence about the homogeneity of these scales; demonstrated that the psychosocial climate scales and ESB population measures show considerable evidence of stability over time; and shown how the ESB measures correlate with each other and with a few criterion variables. Subsequent chapters present evidence derived from closely related measures of school climate that appears useful in interpreting the ESB measures, and they illustrate the interpretation of school profiles using the ESB.

[FN] More sophisticated users can center the confidence interval around estimated true scores. This is particularly desirable when scores are far from the mean for schools.

Chapter 7
Some Uses Of Climate Measures

The Effective School Battery (ESB) can provide information needed for making policy regarding the organization of schooling. This chapter illustrates how climate assessment is useful in making decisions about school organization and in educational evaluations. These illustrations use forerunners of the ESB that were used in policy-related or evaluation research.

A Study of School Disorder

The usefulness of school climate assessments in understanding and learning to cope with important school problems is illustrated in a study by G. Gottfredson and D. Gottfredson (1985). In that study, climate measures resembling those incorporated in the ESB were used to examine the correlates of rates of personal victimization in a large nationally representative sample of public secondary schools. Some examples from that research illustrate one way to use climate measures. Table 46 (constructed from other tables in the G. Gottfredson & D. Gottfredson 1985 report) shows reliabilities and correlations with teacher victimization for several psychosocial climate measures based on student reports. The table shows that these measures of student perceptions of the fairness and clarity of rules, of the degree of student influence, and of group

TABLE 46
Correlations of Illustrative Psychosocial Climate Scales Based on Student Reports with Teacher Victimization

Climate scale	Alpha	Correlation with teacher victimization
Perceived fairness and clarity of rules	.78	-.36*
Student influence	.79	.31*
Perceived firmness and clarity of rules	.56	-.22*
Delinquent youth culture	.90	.20*
Good race relations	.81	-.41*

Source: G. Gottfredson and D. Gottfredson (1985).
*$p < .01$

relations are correlated with an independent criterion of great concern — teacher victimization — in a large sample of secondary schools. The G. Gottfredson and D. Gottfredson report, which describes these climate scales in greater detail, presents analyses implying that psychosocial climate influences victimization rates even when a host of other studentry, community, and school characteristics are statistically held "constant."

A similar set of results, also from the G. Gottfredson and D. Gottfredson (1985) research, is presented in Table 47. In this instance aggregated reports of teachers and students about themselves (population measures) are used to characterize the schools. These population measures assess the degree to which students believe in conventional social rules, are college oriented, are socially or educationally disadvantaged; and the degree to which teachers hold punitive attitudes. (These measures are the forerunners of and closely resemble the ESB Belief, Educational Expectation, Parental Education, and Nonauthoritarian Attitude measures, respectively. The measure of punitive attitudes is scored in the direction opposite the scoring of Nonauthoritarian Attitudes in the ESB.)

The importance of these research results is that they illustrate that potentially manipulable

TABLE 47
Correlations of Illustrative School Population Measures with Teacher Victimization

Population measure	Alpha	Correlation with teacher victimization
Student belief in conventional rules	.71	-.41*
Student college preparation orientation	.82	.21*
Student social disadvantage	.83	.54*
Punitive teacher attitudes	.54	.34*

Source: G. Gottfredson and D. Gottfredson (1985).
*$p < .01$

characteristics of schools can be measured. Measurement suggests areas where school improvement efforts might focus, and subsequent measurement of the same dimensions can be used to estimate the effectiveness of school improvement efforts.

Grade Structure and School Climate

A related use of climate assessments would be to guide policy makers in decisions about grade structure reorganizations, changes in school size, consequence of school integration, and the like.

An important question increasingly facing educational policy makers has to do with the consequences of grade structure reorganization in public secondary schools. Secondary school enrollments are now declining rapidly due to demographic trends, especially in the Northeastern and Northcentral United States central cities. These enrollment changes result in financial limits on school systems' abilities to maintain schools as they are currently organized. These limits are leading frequently to school closings, consolidations, and changes in the grade-level composition of schools. Furthermore, many educators currently believe that a "middle school" arrangement in which a school serves sixth, seventh, and eighth graders results in calmer and more easily managed environments than does the traditional "junior high" arrangement serving seventh, eighth, and ninth graders. By examining

TABLE 48
Grade Structures in the Safe School Study's Sample of Public Secondary Schools
(*N* = 642)

Grade structure	Percent
Traditional junior high, 7-9	19.5
Middle school, 6-8	12.3
Three-year high school, 10- 12	16.0
Four-year high school, 9-12	22.6
Two-year junior high, 7-8	7.3
Six-year high school, 7-12	5.5
Two-year junior high, 8-9	2.3
Two-year high school, 11-12	1.2
Other arrangements (e.g., comprehensive, single year, or not reported)	13.2

data about the climates of schools with alternative grade structures, insight about the likely consequences of alternative grade structures may be gained.

The distribution of the most common grade structure variations in the NIE's (1978) Safe School Study sample of 642 public secondary schools is shown in Table 48. The most common grade arrangement in secondary schools is the four-year high school serving grades 9 to 12. The traditional three-year junior high serving grades 7 to 9 is the second most common arrangement. Substantial proportions of secondary schools are arranged as middle schools (grades 6 to 8) and three-year high schools (grades 10 to 12). Smaller proportions of schools have other arrangements, such as two-year junior highs, six-year high schools, two-year high schools, or single year or comprehensive grade levels.

TABLE 49
Reliability Coefficients for School Climate Scales Based on Safe School Study Student and Teacher Reports

Scale	Number of Items	Number of Schools	Reliability
Student reports			
Belief in conventional rules	5	621	.78
Delinquent youth culture	9	614	.91
Firm rule enforcement	6	614	.67
Perceived fairness and clarity of rules	6	614	.79
Race relations	3	614	.81
School attachment	12	614	.87
Student influence	7	614	.79
Student victimization	5	621	.80
Teacher reports			
Ambiguous sanctions	2	623	.41
Parent-student influence	2	623	.70
Punishment orientation	4	623	.57
Teacher-administration cooperation	4	623	.69
Teacher victimization	7	623	.78

To examine the climates of these schools, forerunners of the ESB scales used in earlier research by G. Gottfredson and D. Gottfredson (1985) were rescored. Rescoring was necessary because in the original research many of the scales were formed using items standardized separately for "junior" and "senior" high schools, and some scales were constructed from slightly different items for these two groups of schools. That form of scale construction is undesirable when the aim of the research is to *compare* schools of different types. Accordingly, the results presented here are based on standardized item scales with the entire sample of secondary schools used as the basis for the standardization. The item content of the scales used here is the same as in the earlier research, except that four items from the school attachment scale were dropped to achieve greater content validity, and the items in the scale presented here are the same for schools of all types. The reliabilities of these rescored scales are shown in Table 49. With the exception of ambiguous sanctions and teacher

punishment orientation, these scales have reasonably high reliability. Sample items from each scale are presented in Table 50, which also lists the ESB scale most closely related to the climate scales reported here.

Scores on these climate scales can be used to characterize schools of various types. Tables 51 to 54 show average T-scores (mean of 50 and standard deviation of 10) for a national sample of secondary schools (NIE, 1978) for traditional junior high schools, middle schools, three-year high schools, and four-year high schools located in different kinds of communities. In these tables "big city" means a Standard Metropolitan Statistical Area (SMSA) central city with population of 500,000 or more; "small city" means the remaining SMSA central cities; "suburban" means the non-city portions of SMSAs; and "rural" means non-SMSA counties. Because of small cell sizes for the less common kinds of grade arrangements, only results for the four most common arrangements are shown in the tables.

The results in Tables 51 to 54 are descriptive rather than explanatory. They show, for example, that ambiguous sanctions are especially common in big city middle schools and that they are uncommon in rural and suburban middle schools. Belief in conventional social rules is high in big city three-year high schools and low in big city traditional junior highs. Student victimization is high in the big city middle schools and low in suburban three-year high schools.

Because Tables 51 to 54 are difficult to integrate, and because the illustrative policy question has to do with the effects of grade structures on school climate, it is desirable to examine the relation of grade structure to these climate measures independently of location, community characteristics, and mean grade level. Table 55 was prepared to make this examination possible. In this table, T-scores are adjusted for location, type of community, and average grade level. Technically, a hierarchical analysis of covariance was used to produce these results. Effect parameters for type of school were first adjusted for (a) Community Disorganization (G. Gottfredson & D. Gottfredson, 1985), which is a factor score based on such community characteristics as the percentage of female-headed families and unemployment rate; (b) the location of the school (big city, etc.); and (c) mean grade level (to control for the effect of student age). The adjusted raw regression coefficient (or "effect" parameter estimate) for each type was then added to the grand mean for each scale.

Table 55 is easier to interpret than are the detailed tabulations. Scores are adjusted for location and type of community and for student age. When these extraneous variables are statistically held "constant," belief is relatively high in three-year high schools and low in two-year (grade 8 and 9) junior high schools, for example. Additionally, student perceptions of the fairness and clarity of school rules is high in three-year high schools and low in middle

TABLE 50

Sample Climate Scale Items From the Safe School Study with Most Related ESB Scale Name

Student Reports	**Teacher Reports**
Belief in conventional social rules *(Belief in Rules)*	Ambiguous sanctions *(Avoidance of Grades as Sanction)*
Taking things from stores doesn't hurt anyone. (—)	In dealings with misbehaving students, how often do you do the following things?
Delinquent youth culture *(Positive Peer Associations/Belief in Rules)*	Lower their grades if it is repeated.
Would you do any of the following things if you could get away with it? [Skip school]	Parent-student influence *(Parent/Community Involvement, Student Involvement)*
Firm rule enforcement *(Clarity of rules)*	Parents have a say about how this school is run.
If a rule is broken, students know what kind of punishment will follow.	Punishment orientation *(Nonauthoritarian Attitude)*
Perceived fairness and clarity of rules *(Fairness of Rules/Clarity of Rules)*	A few pupils are just young hoodlums and should be treated accordingly.
The school rules are fair.	Teacher-administration cooperation *(Smooth Administration)*
Race relations *(Race Relations)*	In your opinion, how well do the following groups get along in your school? [Teachers and administrators]
How well do the following people get along at your school? (Students of different races]	Teacher victimization *(Personal Security)*
School attachment *(Attachment to School)*	Did anyone take things directly from you by force, weapons, or threats at school in (last month)?
How well do you like the following: [this school?]	
Student influence *(Student Influence)*	
Students can get an unfair school rule changed.	
Student victimization *(No direct parallel)*	
At school in (last month) did anyone physically attack and hurt you?	

schools, six-year high schools, and grade 8 and 9 junior high schools. Significant differences among the various types of schools are found only for some of the climate scales: delinquent youth culture, firm rule enforcement, school attachment, teacher punishment orientation, teacher-administration cooperation, and teacher victimization.

In general, the pattern of results shown in Table 55 supports some common perceptions about the presence of a ninth grade in a school. Traditional junior high schools (grades 7 through 9) and grade 8 and 9 junior high schools are higher in delinquent youth culture and in teacher punishment orientation than are middle schools (grades 6 through 8) and grade 7 and 8 junior high schools. In addition, three-year (grades 10 through 12) senior high schools generally have more positive climates than four-year (grades 9 through 12) high schools. Students generally report firmer rule enforcement in schools with ninth grades than in other schools. The results are consistent with the speculation that removing ninth graders from a junior high school would make it a more pleasant place, but that adding a ninth grade to a three-year high school would make it a less pleasant place (and vice versa).

Other results in Table 55 are also of interest. Teacher-administration cooperation is, in general, higher in the high schools than in the junior highs or

TABLE 51

Climate Scores for Big City Secondary Schools with Most Common Grade Structures

Scale	**Traditional Jr. (7-9) (*n* =31-33)**	***Middle (6-8) (n =13)***	***Three-Yr. High (10-12) (n =12-15)***	***Four-Yr. High (9-12) (n =33-34)***
Student reports				
Belief in rules	41.4	41.7	60.9	52.0
Delinquent youth culture	47.2	43.4	59.2	56.4
Firm rule enforcement	50.5	45.8	46.2	41.3
Perceived fairness and clarity	48.1	40.6	49.2	47.2
Race relations	41.1	43.9	45.4	46.9
School attachment	49.3	47.2	50.5	52.0
Student influence	54.7	59.3	49.3	53.0
Student victimization	54.1	61.0	43.4	47.3
Teacher reports				
Ambiguous sanctions	62.3	64.7	54.7	60.3
Parent-student influence	46.4	44.2	56.2	50.8
Punishment orientation	58.2	55.9	49.0	54.1
Teacher-administration cooperation	48.0	42.6	45.3	44.0
Teacher victimization	62.4	71.3	51.1	59.5

TABLE 52

Climate Scores for Small City Secondary Schools with Most Common Grade Structures

Scale	**Traditional Jr. (7-9) (*n*=23)**	***Middle (6-8) (n =7)***	***Three-Yr. High (10-12) (n =27)***	***Four-Yr. High (9-12) (n =16)***
Student reports				
Belief in rules	43.6	46.4	57.0	50.4
Delinquent youth culture	47.6	41.1	57.2	59.4
Firm rule enforcement	53.8	48.8	47.8	51.9
Perceived fairness and clarity	47.5	53.6	51.3	47.2
Race relations	42.5	55.9	46.4	50.5
School attachment	48.2	53.2	55.3	50.3
Student influence	52.9	51.7	49.2	49.5
Student victimization	57.4	53.5	45.3	43.4
Teacher reports				
Ambiguous sanctions	53.9	60.8	49.0	52.7
Parent-student influence	49.4	45.7	53.3	45.6
Punishment orientation	53.5	45.8	49.8	51.6
Teacher-administration cooperation	49.7	55.4	45.8	41.8
Teacher victimization	57.1	48.1	50.4	54.2

TABLE 53
Climate Scores for Suburban Secondary Schools with Most Common Grade Structures

Scale	Traditional Jr. (7-9) (*n* =45)	*Middle (6-8)* (*n* =39)	*Three-Yr. High (10-12)* (*n* =40-41)	*Four-Yr. High (9-12)* (*n* -62)
Student reports				
Belief in rules	46.0	45.4	57.6	54.4
Delinquent youth culture	51.2	41.5	60.4	58.5
Firm rule enforcement	52.2	52.1	43.0	46.5
Perceived fairness and clarity	48.4	51.0	52.8	50.0
Race relations	51.9	52.0	56.5	53.7
School attachment	47.1	49.9	54.2	46.0
Student influence	47.4	49.1	53.0	47.0
Student victimization	52.7	56.1	41.9	44.1
Teacher reports				
Ambiguous sanctions	48.0	45.5	48.9	48.2
Parent-student influence	50.7	47.8	53.9	54.6
Punishment orientation	53.0	48.8	47.6	51.9
Teacher-administration cooperation	53.6	56.5	48.9	46.9
Teacher victimization	48.7	47.1	45.9	48.0

TABLE 54
Climate Scores for Rural Secondary Schools with Most Common Grade Structures

Scale	Traditional Jr. (7-9) (*n*=18)	Middle (6-8) (*n*=19)	Three-Yr. High (10-12) (*n*=16)	Four-Yr. High (9-12) (*n* =28)
Student reports				
Belief in rules	46.3	45.1	57.2	56.1
Delinquent youth culture	45.2	38.5	54.0	51.2
Firm rule enforcement	52.4	52.8	47.4	51.7
Perceived fairness and clarity	50.8	51.1	50.7	52.7
Race relations	53.4	46.4	51.1	51.1
School attachment	47.9	48.3	52.7	52.2
Student influence	45.0	49.2	51.6	51.3
Student victimization	53.3	58.5	42.8	46.5
Teacher reports				
Ambiguous sanctions	46.6	42.9	45.9	45.9
Parent-student influence	48.9	43.7	49.8	52.7
Punishment orientation	49.7	46.5	43.9	47.6
Teacher-administration cooperation	49.8	54.8	46.8	48.2
Teacher victimization	44.6	44.6	42.8	44.7

middle schools, but teacher victimization rates are higher in junior and middle than in senior high schools. Ambiguous sanctions are used most often in the junior highs and middle schools — perhaps simply because there is more student misconduct in those schools. Clearly, grade structure should be taken into account when interpreting ESB climate profiles. Junior high schools generally have less pleasant climates than do high schools, and this generalization should be remembered in making interpretations. The use of separate norms for students with different grade structures was rejected in the development of the ESB because such separate norms — or separate norms for different kinds of communities — would obscure precisely the kinds of differences among schools that a climate assessment should address.

Analysis of school climates when schools undergo grade structure reorganizations would provide useful evidence about the consequences of those changes. School systems anticipating such changes should use the ESB to evaluate the reorganization's effects on school climate.

TABLE 55

Climate Scores for Secondary Schools with Most Common Grade Structures: Adjusted for Location, Community Disorganization, and Mean Grade Level

Scale	Traditional Jr. (7-9) (n=117-118)	Middle (6-8) (n =78)	Three-Yr. High (10-12) (n = 92-94)	Four-Yr. High (9-12) (n =138)	7-8 Jr. High (n =44)	Six-Yr. High (7-12) (n =33)	8-9 Jr. High (n =15)
Student reports							
Belief in rules	48.7	50.5	51.9	49.5	51.2	49.7	47.2
Delinquent youth culture***	51.3	45.6	52.9	53.1	46.4	51.4	48.2
Firm rule enforcement**	50.5	48.0	48.5	49.5	47.3	53.0	53.5
Perceived fairness and clarity	47.2	46.4	54.7	51.8	49.6	46.7	46.9
Race relations	49.8	51.7	48.1	49.2	52.2	50.1	47.2
School attachment**	49.2	51.2	51.8	48.0	51.9	47.1	50.0
Student influence	48.2	49.2	53.9	50.6	48.5	47.5	46.8
Student victimization	48.5	49.2	52.0	51.2	47.5	48.2	53.5
Teacher reports							
Ambiguous sanctions*	54.0	53.6	45.8	48.1	51.9	47.7	47.7
Parent-student influence	48.6	45.2	54.0	52.8	48.1	51.4	43.6
Punishment orientation***	52.2	47.5	50.0	52.7	44.8	51.6	50.2
Teacher-administration cooperation**	52.4	55.2	44.8	44.5	57.7	48.2	55.2
Teacher victimization**	52.5	52.1	46.8	49.9	50.4	49.0	49.1

*$p < .07$
**$p < .05$
***$p < .001$

Evaluating School Improvement Programs

The most common use of the ESB will be in school diagnosis or needs assessment and the evaluation of school improvement programs. An example of this use is the School Action Effectiveness Study (G. Gottfredson et al., 1983). Evaluations by Cook (1983) and D. Gottfredson (1983) of school improvement programs using the ESB are especially instructive. Some results from the School Action Effectiveness Study's evaluations are used in the next chapter to illustrate the interpretation of climate profiles.

Chapter 8
Interpreting School Profiles

This chapter will help you interpret Effective School Battery (ESB) profiles. It should help board members, administrators, teachers, and students use ESB results. Although the scales in this battery are straightforward, a careful reading of this chapter is required for useful interpretation.

The Context of School Climate Assessment

School climate assessment should be undertaken for an important reason. No school should devote the student and faculty time required to conduct a school survey unless the results are to be put to good use. In general, everyone concerned with the climate assessment should have an understanding of why the assessment is occurring. Usually a school or school system sees a need for information about itself that is useful in determining needs for programs, assessing progress towards educational objectives, or evaluating school improvement programs. At a minimum, the students and teachers filling out the inventories should know that their answers will be helpful in identifying patterns in school climate by showing how their school compares to others. Everyone should be directed to read the statements on the front of the questionnaire booklets. Administrators should be prepared to show leadership in conducting the climate assessments and in interpreting and using the results.

Demystifying Climate Assessment

Anyone interpreting ESB profiles should understand three essential points. First, the management of schools and educational programs requires the concerted action of many people, and some of these people must exercise leadership in taking the initiative to formulate plans, implement programs, and assess progress. The best information available about the schools and educational programs should be used in this process. Second, the ESB profiles will provide some useful information, but it should be interpreted in the context of other information about the school: the kind of community the school is in, evidence about student and staff attendance, student academic achievement, budgets, and the experience and enthusiasm of faculty and administration. ESB profiles provide a source of information that supplements, but should not supplant, other kinds of data available about schools. Third, the development and management of school programs is a continuing process, not a one-shot event. Information about schools should be used in long-range planning, and plans should be periodically reviewed to determine if they are still appropriate and if objectives are being achieved. Climate assessment may serve as a useful stimulus to planning and program development, but nothing will happen unless people in the school act on the information over a period, not of days, but of years. Useful guidance for planning school improvement programs is provided by G. Gottfredson (1984), Howard (1978), Wayson, DeVoss, Kaeser, Lasley, and Pinnell (1982, pp. 81-88), and by personnel from various regional laboratories sponsored by the Department of Education.

No inventory can provide an infallible portrait of a school. The ESB is simply a set of questions that allows students and teachers to report how they feel about their school and themselves. The profile summarizes those reports in a systematic way. Because there are many questions and because many people answer them, the results are much more dependable than are unsystematic attempts to understand the school. There is no magic in this process of summarizing information; ESB profiles will not solve a school's problems or reveal magic solutions to them.

Interpreting School Profiles

A person should be designated to take the leadership in interpreting the survey results. If at all possible, this person will do his or her homework before meeting with school members to discuss the survey results. That is, the profiles should be studied in advance to rehearse the presentation and interpretation. Such advance preparation is essential until the person helping to interpret climate results has gained the necessary experience. It is highly desirable that the person designated to take this leadership be qualified by education and experience to interpret educational tests. Generally such persons will have completed at least one course in tests and measurements or the equivalent.

Quality Control Indicators

The first place to start in interpreting results is with the quality control indicators. If surveys have not been carefully conducted and participants have not approached their task in a serious manner, the profiles may not be particularly meaningful.

The most important quality control indicator is the proportion of persons intended to complete surveys who actually completed them. The ESB survey administration manual contains forms to be filled out when conducting the surveys to ensure high response rates. If the guidance in the administration manual was followed, low response rates will generally not be a problem, provided that building administrators and teachers have cooperated with the climate assessment. In any case, before proceeding with interpretation, the response rate should be calculated by dividing the number of surveys scored by the number of persons in the survey samples.[4] The number of surveys scored is shown on each profile sheet. The number of persons in the survey samples are usually the number of students and teachers in the school. If samples of students have been surveyed, the number of students in the survey sample will be different from the number of students in the school. Use the following formulas to calculate response rates:

Student response rate =

$$\frac{\text{Number of surveys scored}}{\text{Number of students in sample}} \times 100$$

Teacher response rate =

$$\frac{\text{Number of surveys scored}}{\text{Number of teachers in school}} \times 100$$

If either response rate falls below 75%, the survey results should be interpreted with caution. There is no reason a carefully conducted climate survey can not easily exceed response rates of 80%, and this should be regarded as a minimum standard in conducting surveys. The higher the response rates the better.

Attend also to the absolute number of students and teachers who completed surveys. The norms for the ESB are based on surveys where at least 100 students or at least 15 teachers completed questionnaires in the schools. When the numbers of persons completing surveys fall below these numbers, school scores are more variable than scores in the normative sample. Interpret scores based on small samples cautiously, recognizing that extremely high or low scores are not unusual with small samples. Of course, some schools have fewer than 100 students and fewer than 15 teachers. The ESB can still be used, but the expected greater variability in scores should be taken into consideration when interpreting profiles.

The final quality control indicator to examine is the Invalidity scale on the student population profile. This score is reported as a percentile rank. The Invalidity scale measures careless or unusual responses to questions, and very high school average on this scale suggest either that (a) the survey was not administered with an atmosphere of seriousness, (b) a large number of rebellious students attend the school making climate assessment difficult, or (c) a large proportion of students completing the survey had difficulty reading the questions. Invalidity scores above 90 should suggest caution in interpreting the profile.

The Teacher Psychosocial Climate Scales

The school psychosocial climate profile based on teacher reports shows results on nine scales. It is best to begin interpretation with this profile because it usually forecasts to some degree the level of enthusiasm and receptivity with which a school's faculty will approach survey feedback. Scores are reported verbally, numerically, and graphically. The numbers, words, and the graph all present the same information: The graph makes visual interpretation easier, and the numbers allow precise communication. Percentile ranks tell how many schools out of a sample of 100 schools might be expected to have a score lower than this school's score. The verbal interpretations correspond to the following percentile ranges:

Interpretation	**Percentile**
Very high	94th and above
High	85th to 93rd
Moderately high	70th to 84th
Average	31st to 69th
Moderately low	16th to 30th
Low	7th to 15th
Very low	6th and below

When examining the teacher psychosocial climate profile, note first the overall elevation of the entire profile. That is, notice whether most of the scores tend to be high or low. Schools with generally positive climates will have most of their scores plotted on the right side of the graph, schools with uncomfortable climates will have most of their scores plotted on the left side of the graph. Then examine each scale of the profile to gain a detailed portrait of

[4] If the person coordinating the school climate surveys completed and returned a Quality Control Worksheet for the school, the response rate will appear printed on the profile sheet. You only need to calculate the response rate if it does not already appear on the profile or if the survey involved a sample of students rather than all students.

school climate based on each ESB dimension. Some of these dimensions are rather general indicators of school climate and others are more specific.

The Safety and Morale scales are general indicators. The Safety scale broadly indicates how safe teachers perceive the general school environment to be, and the Morale scale is a general indicator of the enthusiasm of a school's faculty and their confidence in the school. In a school with low Safety scores, most faculty are likely to perceive that the school has general discipline problems. Safety scores tend to be higher in high schools than in junior highs or middle schools.

In schools with low Morale scores, many faculty may share a sense of resignation about school climate and have little confidence that much can be done about it. In schools with low Morale, there may be little initial enthusiasm for planning school improvements even though a need for improvement may be clearly perceived. Experience implies that such schools are among the most challenging organizations in which to plan and implement school improvement programs, but they are usually schools where successful programs are most needed. In contrast, schools with high Morale scores have enthusiastic faculty who are often eager to participate in the development of new programs.

The remainder of the scales on the teacher psychosocial climate profile are indicators of more specific aspects of school climate.

The Planning and Action scale reflects teacher perceptions of the degree to which the school takes an experimenting or innovative approach to planning school programs.

The Smooth Administration (or Administrative Leadership) scale is an important indicator of the way teachers perceive the school administration. Low scores may result from perceptions of administrative ineptitude, or they may result from perceptions that the administration is overbearing or demanding. High scores on the Smooth Administration scale imply that teachers perceive that they get the support and help they need to do their jobs when they need it.

The Resources scale focuses on resources needed for instruction. High scores suggest that the school has adequate instructional supplies and other resources, and low scores suggest difficulty in obtaining needed teaching supplies.

The Race Relations scale is a relevant aspect of school climate for integrated schools. In integrated schools, a high score implies that different ethnic groups get along well, and a low score implies some degree of tension or animosity among groups. In schools with students and faculty of only one ethnic group, this scale is meaningless and it should be disregarded.

The Parent and Community Involvement scale assesses the degree to which a school utilizes community resources in its programs. High scores indicate that parents or community organizations participate in school decision making or in helping with school activities. Low scores suggest that these school resources are not being utilized.

The Student Influence scale summarizes teacher perceptions about the extent to which students participate in school decisions that affect them. Many educators believe that student influence in school decision making is desirable because it fosters the social integration of students and leads to greater relevance of school procedures or curricula to students' lives.

The Avoidance of Grades as a Sanction scale focuses on a single educational practice. In schools where many teachers lower grades in response to student misconduct, this score will be low. The use of grades as a punishment is probably a poor practice and should be avoided. Other mechanisms should be available and used to respond to disciplinary problems.

Forming hypotheses. As you interpret the profiles, begin to formulate hypotheses about the general nature of the school's climate. For example, a pattern of scores where Safety is above average; Morale is moderately low; and all other scales except Smooth Administration are above average, but with a low score on the Smooth Administration scale might suggest the hypothesis that tensions between faculty and administration are reducing the enthusiasm of the staff. Check such hypotheses with other information as you proceed through the profiles and through direct questions to school people. The goal of this hypothesis formulation and testing is to produce an overall diagnostic formulation about a school's strengths and weaknesses.

The Student Psychosocial Climate Scales

Next examine the student psychosocial climate profile. This profile contains six scales presented in the same manner as the teacher psychosocial climate profile: verbal summaries expressing percentile ranks and a graphic interpretation of T-scores. Begin by noting the overall elevation of the profile. When

most scores are plotted toward the right side of the graph, students perceive their school in generally positive ways. When most scores are plotted toward the left side of the graph, students perceive their school in a generally negative way.

Two of the scales — Safety and Respect for Students — assess rather general aspects of school climate. The Safety scale indicates how students perceive the general safety of the school environment, and the Respect for Students scale is a general indicator of how students feel treated in the school.

In a school with low Safety scores, many students are likely to perceive the school as unsafe or threatening, and some students may be afraid to come to school. Safety scores tend to be higher in high schools than in junior highs or middle schools.

The Respect for Students scale is high in schools where students are treated in a dignified way, and this scale is low in schools where students feel they are subjected to degrading experiences or treated with a lack of respect. It is a general indicator of whether students perceive their treatment in the school in a positive or negative way.

The remaining scales in this profile reflect more specific student perceptions of their school's climate.

The Planning and Action scale indicates the extent to which students perceive that the school undertakes efforts to plan and implement school improvements. In schools with high scores, students perceive that the administration or faculty actively pursue school improvement efforts, and students may be involved in such efforts. In schools with low scores, students perceive little activity of this kind.

The Fairness of Rules scale indicates whether students believe the school's rules to be equitable and fairly administered. When the score is low, students perceive injustice or inequity. When the score is high, students believe rules are administered fairly and equitably.

The Clarity of Rules scale indicates whether or not students know what the school rules are, and what the consequences are for rule violation. In a low scoring school, many students do not know what the school rules are, are uncertain about the consequences for rule violation, or perceive ambiguity in school disciplinary policies. Schools with clear rules and where administrators and faculty follow clear disciplinary procedures generally have high scores on this scale.

The Student Influence scale summarizes the students' point of view about the extent to which they are able to influence matters of concern to them. A low score suggests that students feel powerless to bring about desired changes in school practices, and a high score suggests that students feel the school is open to their suggestions.

Continuing the hypothesis formulation and testing process. When interpreting the student psychosocial climate profiles, continue the hypothesis formulation and testing process. High and low scores on successive scales may reinforce or alter interpretations formed when examining the teacher profile. For example, an extremely low score on the Clarity of Rules scale may suggest the hypothesis that a source of tension between administration and faculty (in the hypothetical school whose teacher psychosocial climate profile was described earlier) has to do with school rules for student conduct. Test the hypotheses you generate against other evidence in the profiles and other things known about the school, and also by directly asking school personnel or students about your hypotheses.

Margins of Error for Psychosocial Climate Scores

It is useful to think of any psychosocial climate score as representing an estimate of the actual score, that is subject to error in either direction. Some users may want to use Table 45 (in Chapter 6) to construct “confidence intervals” around their scores. For example, by multiplying 1.64 times the values of the standard errors of measurement shown in Table 45 and adding and subtracting the product from a climate score, you can estimate the interval within which one can be 90% confident that the actual score lies. There is no particular evidence at present to support the utility of making fine-grained interpretations based on patterns of scores in these profiles. That is, no evidence suggests the utility of basing interpretations on observations such as "the Fairness of Rules is higher than the Clarity of Rules." If such interpretations are to be made, users should refer to the psychometric evidence presented in Chapter 6 to calculate appropriate standard errors for difference scores. Most users will have no need to perform these calculations.

One kind of difference score is important to most users: differences across time. Many schools will use the ESB psychosocial climate scales to assess progress in school improvement programs. Several handy tools are helpful in interpreting differences in scores over time. First, the profile sheets are constructed to make the interpretation of differences easier. Although percentiles are useful because

most educators are familiar with them, they are not as useful for understanding the magnitude of differences as are other ways of presenting scores. Most educational researchers find it easier to grasp the meaning of differences in terms of standard deviations. The solid vertical lines on the profile sheets mark off standard deviation units. Specifically, the "average" range spans one standard deviation — from half a standard deviation below the mean to half a standard deviation above the mean. Each of the other ranges marks off half a standard deviation. Because estimates of the standard error of differences made in Chapter 6 imply that they range from about .4 to 1.0 standard deviation, one rule of thumb is to be cautious about interpreting differences smaller than about one standard deviation. The vertical lines on the profile sheets help to eyeball the differences using this rule of thumb.

A more precise way of determining how much confidence to put in any observed difference in scores from year to year is to use Table 56. This table contains the minimum magnitudes of differences that exceed 1.64 and 1.96 times the standard error of differences. Roughly, this table provides critical values for the .10 and .05 "significance" levels of observed differences. To use this table, subtract the baseline year raw score from the raw score obtained one or two years later. Look up the absolute value of this difference in Table 56. If the observed difference is greater than the appropriate number in Table 56, you can be reasonably confident that a real change has occurred. Remember to use raw scores, not percentile scores or T-scores, when using Table 56.

TABLE 56
Critical Values of Differences in ESB Climate Scales Administered One and Two Years Apart

	One-year		Two-year	
Climate scale	**.10**	**.05**	**.10**	**.05**
Student reports				
Safety	.092	.110	.075	.090
Respect for students	.262	.314	.262	.314
Planning and action	.134	.161	.120	.143
Fairness of rules	.131	.157	.128	.163
Clarity of rules	.092	.110	.084	.100
Student influence	.164	.196	.164	.196
Teacher reports				
Safety	.338	.404	.241	.288
Morale	.120	.143	.120	.143
Planning and action	.097	.116	.084	.100
Smooth administration	.105	.125	.103	.123
Resources for instruction	.546	.653	.546	.653
Race relations	.289	.345	.254	.304
Parent and community involvement	.118	.141	.088	.106
Student influence	.148	.176	.148	.176
Avoidance of grades as sanction	.102	.122	.088	.106

Teacher Population Measures

The school population profile displaying teacher characteristics contains seven scores summarizing average teacher attitudes and experiences. They are displayed in the same way as psychosocial climate scales, but should be interpreted as average teacher characteristics rather than as perceptions of the organization's climate.

The Pro-integration Attitude scale indicates the average teacher's attitudes towards integrated education. A high score suggests that teachers view integrated education in a positive way, and a low score suggests that the average teacher may be somewhat insensitive to issues of racial equity.

The Job Satisfaction scale tells how the average teacher feels about his or her job. A high score indicates that teachers typically like their jobs in the school, and it probably means that staff turnover is minimal. A low score indicates that teachers typically dislike their jobs, and it may mean that teachers would prefer to transfer out of the school if given the option.

The Interaction with Students scale indicates how much positive social interaction the average teacher reports having with students. When the score is high, many teachers report friendly interaction with students. When the score is low, few teachers report much friendly interaction.

The Personal Security scale is an indicator of the average teacher's experience of victimization. In a low scoring school, relatively many teachers report receiving obscene remarks or gestures from students, threats, thefts, and even attacks. Incivility characterizes a low scoring school, and if other evidence implies that many teachers experience serious victimization, a serious security problem may exist in the school. A high score means that teachers rarely experience indignities or victimization in the school.

The Classroom Orderliness scale indicates how orderly the average teacher's classroom is. In high scoring schools, teachers report relatively little disruption in their classrooms. In low scoring schools, disruption interferes with teaching in many classes. A low score suggests that some teachers

may need to learn more effective classroom management techniques.

The Professional Development scale indicates how much exposure to continuing education the average teacher in a school has had in the past year. Schools with extensive staff development activities will earn high scores, and schools where there is little incentive or opportunity for participation in in-service training will earn low scores.

The Nonauthoritarian Attitude scale summarizes information about teachers' attitudes about student-teacher authority relations. A low score suggests that many teachers have a punitive, moralistic attitude about student misbehavior. A high score suggests that many teachers have a more flexible attitude about coping with student misconduct.

Student Population Measures

The school population profile displaying student characteristics contains twelve scores summarizing average student attitudes and experiences. They are displayed in the same way as psychosocial climate scales but should be interpreted as average student characteristics rather than as perceptions of the organization's climate.

Parental Education summarizes information about the educational background of the average student's parents. A high score indicates that most students come from families with highly educated adults and that the students attending the school probably come from relatively affluent families and communities. A low score indicates that most students' parents completed relatively little formal education and that their families are probably not affluent.

The Positive Peer Associations scale describes the nature of peer relations for the average student. If this index is high, most students associate with peers who value schooling and tend to stay out of trouble. If the index is low, many students report that their friends dislike school and get into trouble. Low scores probably indicate that delinquent behavior is a problem for a substantial number of students.

Educational Expectation indicates the level of academic orientation. A high score indicates that the average student expects to complete a great deal of formal education, and a low score indicates that the average student does not expect to complete much formal schooling.

The Social Integration scale indicates the extent to which the average student feels integrated with, rather than alienated from, the social order of the school. In a low scoring school, many students feel alienated or out of place. In a high scoring school, most students feel connected to the social order.

Attachment to School is a sign of the average student's liking for school. In a high scoring school, many students like school and are expected to have a stake in good behavior as a result of this bond of attachment to the school. In a low scoring school, many students dislike school and are expected to engage in misconduct because they do not care how their behavior is perceived by school staff.

The Belief in Rules scale measures the extent to which the average student believes in the validity of conventional social rules. In a high scoring school, most students regard conventional rules as appropriate guidance for conduct. In a low scoring school, many students report feeling free to violate conventional standards for conduct. Low scoring schools are expected to have problems with discipline.

The Interpersonal Competency scale is an index of the degree to which the typical student is competent in interpersonal relations. This scale assesses an aspect of the psychosocial maturity of the average student. Low scores may suggest the desirability of curricula designed to increase student interpersonal skills.

The Involvement index summarizes information about the extent to which the average student participates in a variety of school extracurricular activities. A high score means that many students report participation in several activities, and a low score means that few students report participating in many activities.

The Positive Self-Concept scale indicates how the average student describes himself or herself. High scores imply that the average student has high self-esteem and regards himself or herself as a conventional, rule-abiding individual. Low scores imply that many students see themselves in disparaging ways or have a "troublemaker" self-concept. Low scoring schools are expected to have discipline problems.

The School Effort scale indicates how much care and effort the average student devotes to school work. In low scoring schools, many students report carelessness or a lack of concern about school assignments. These schools may be assigning little

homework or failing to respond to student effort in constructive ways.

The Avoidance of Punishment index summarizes information about how often the average student experiences punishment. In low scoring schools, many students report being punished in a variety of ways for their behavior in school. In high scoring schools, relatively few students report much punishment either because behavior is responded to with rewards rather than punishments or because most students are well behaved.

The School Rewards scale indicates how much the average student is rewarded for his or her behavior. A high score means that the typical student experiences rewards relatively frequently for school performance. A low score suggests that the school is overlooking important sources of student motivation and social control.

Margins of Error for Population Measures

It is useful to think of the school means on the population measures as the best estimate of the population characteristic, but as an estimate subject to some error. The margin of error depends on the amount of heterogeneity of the students or teachers in a school, the sample size, and the proportion of the population sampled. To make precise determinations of the margin of error for a particular application, some schools would need the help of a competent statistician. However, a rule of thumb is available for judging the margin of error of raw scores. The printout of raw scores that accompanies the profile shows the mean, standard deviation, and approximate standard error of estimate. The standard error of estimate can be multiplied by 1.96 and the product added to and subtracted from the raw score mean to obtain an estimate of the range within which one can be 95% confident the mean actually lies. This is a conservative procedure, because in most applications a large proportion of the school's population will have completed surveys.

As a rule of thumb, differences in mean population characteristics from year to year that are much smaller than two standard errors of estimate should be interpreted with caution. If available, advice from a competent researcher or statistician is useful in making precise determinations of the significance of observed differences. This is particularly important if students or teachers have been sampled other than by simple random sampling.

Forming and Validating Diagnostic Impressions

Experience implies that the ESB should not just be interpreted scale-by-scale, but that it is useful to try to formulate an integrated picture of the school as an organization by examining the profiles and other information available about the school. The interpretation of the profiles should result in a coherent "story" about the school that makes sense in terms of all the available evidence. The validity of the interpretation depends in part upon the extent to which the pieces seem to fit together and are judged as accurate by people with good sense and maturity who know the school.

When used as a diagnostic instrument to assess needs for school improvement and to guide plans for the development of programs, the portrait of the school that results from the scrutiny of school profiles should make sense to the people who must carry out those plans.

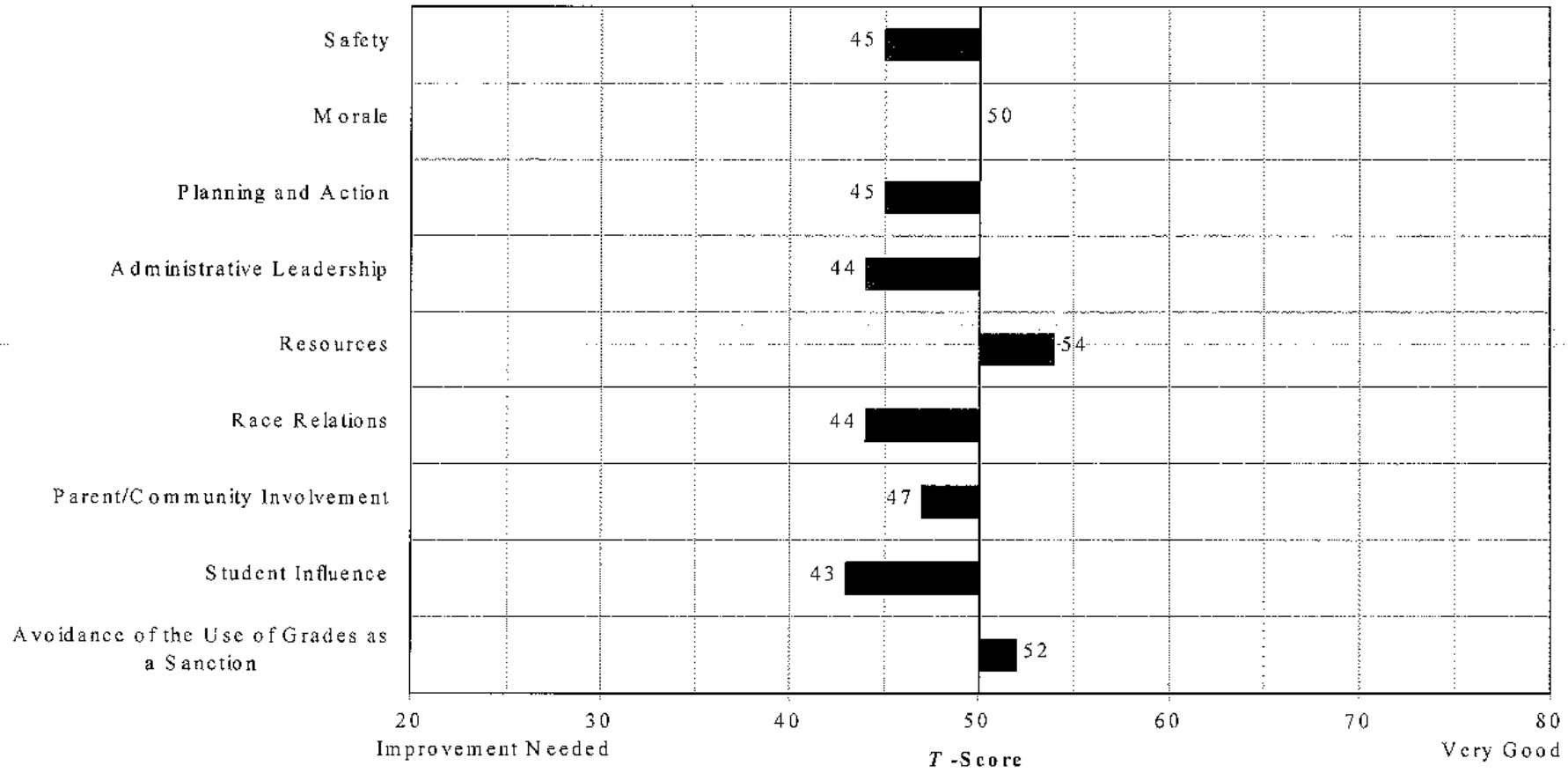
Case Examples

Examples of ESB profiles for four schools illustrate some actual patterns of results and show how they might be interpreted. Users should study these case examples to gain a sense of the art of profile interpretation. Details have been changed here and there to keep the identity of the schools confidential, but these changes should not interfere with the story each case example tells.

School A

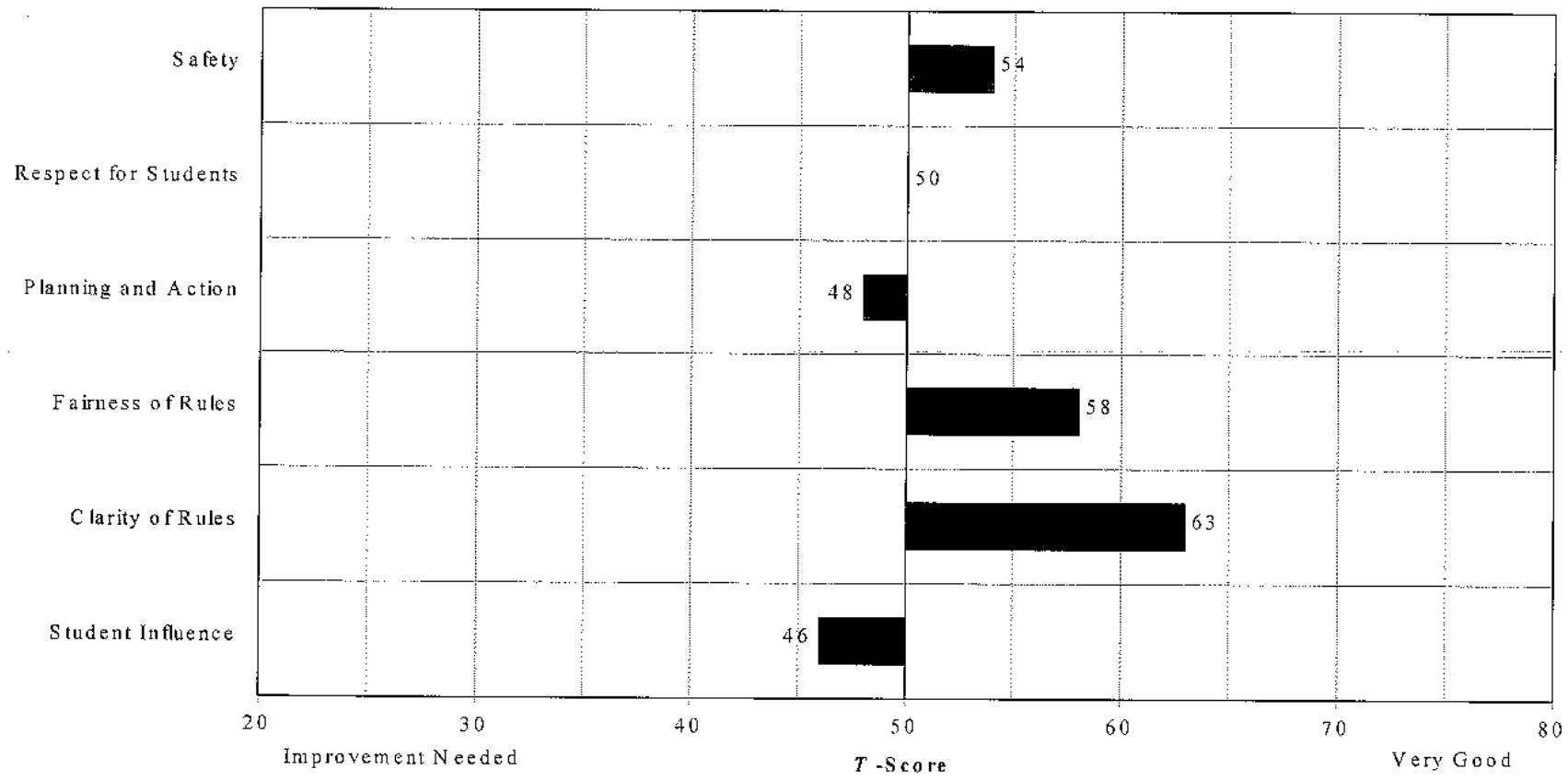
School A is a junior high school with about 700 students located in a mid-sized industrial city. Its student population is 67% white, and the school is located in an area where the population of adolescents is declining in size. This demographic trend, coupled with a recent court order to desegregate the city's public schools, resulted in closing two of the city's junior high schools and busing to integrate the remaining four. When the school was assessed in the Spring of 1981, the chaos created by these changes had settled down, but the declining size of the junior-high-school-aged population was probably still influencing the school. Teachers were concerned about job security: The declining enrollments and school consolidation had resulted in layoffs in recent years. The teachers remaining in the school are mostly veterans, because staff with least tenure go first when there are reductions in force. School bond issues had been voted down by the city's voters in recent years, and the entire system's budget was feeling the pinch.

FIGURE 1a
School A in 1981
School Psychosocial Climate—Teacher Reports



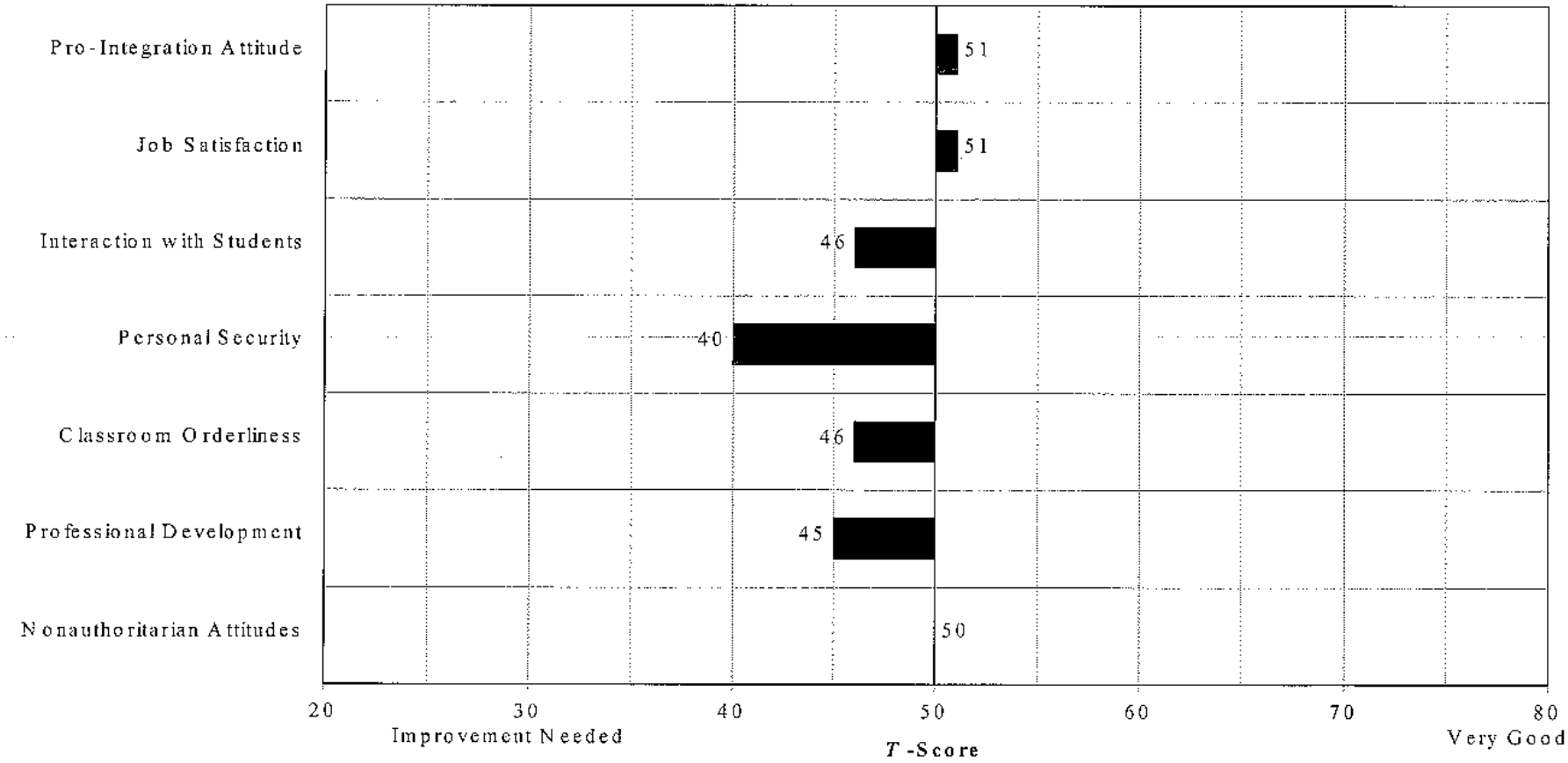
Number of Surveys Scored = 34
Response Rate = 81%

FIGURE 1b
School A in 1981
School Psychosocial Climate---Student Reports



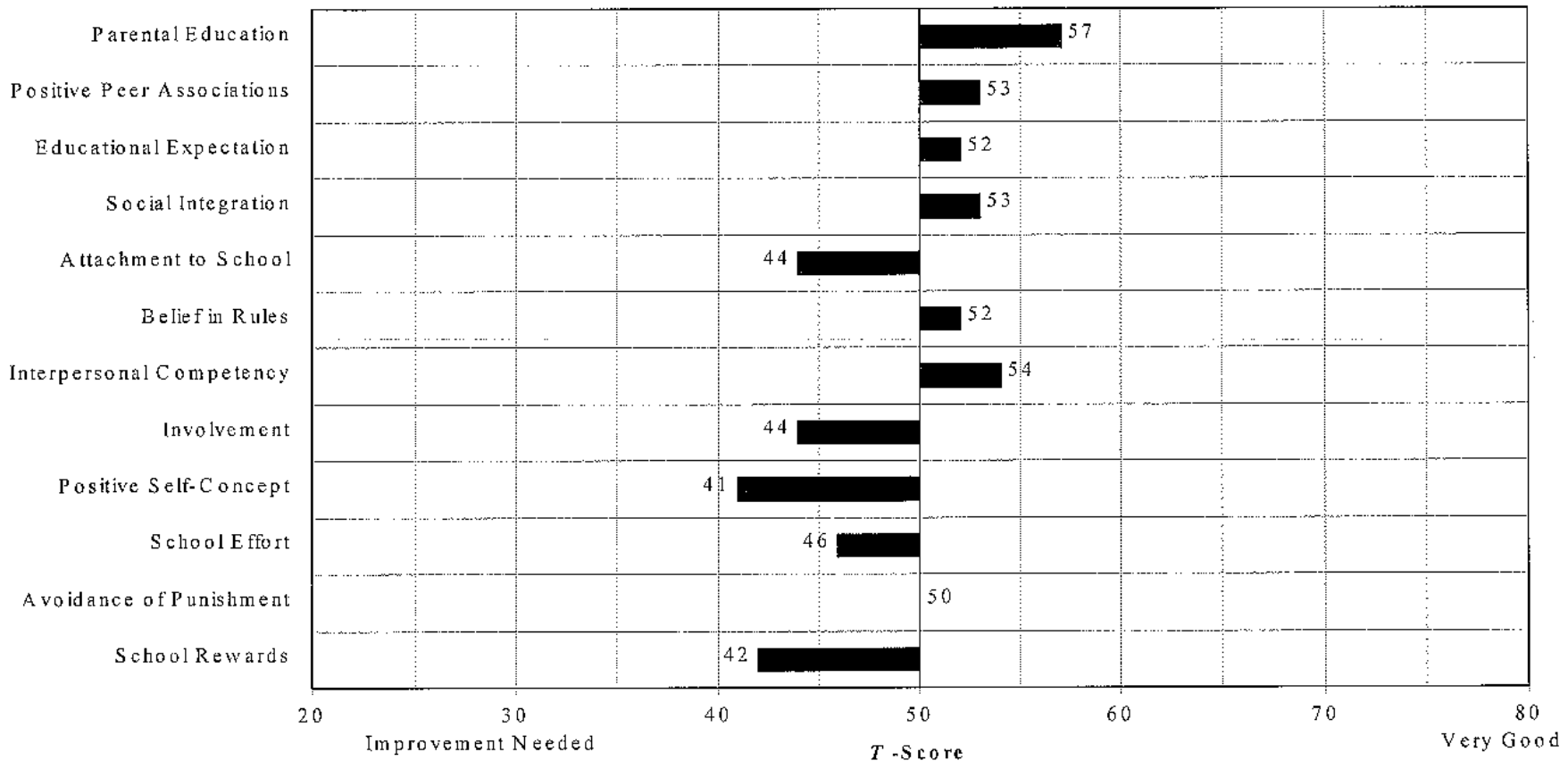
Number of Surveys Scored = 226
Response Rate = 76%

FIGURE 1c
School A in 1981
School Population—Teacher Characteristics



Number of Surveys Scored = 34
Response Rate = 81%

FIGURE 1d
School A in 1981
School Population—Student Characteristics



Invalidity index 11

Number of Surveys Scored = 226
Response Rate = 76%

The pinch is a recent one, because the city is relatively affluent.

The principal had captained this school for almost 20 years. She seems to have a laid back approach to managing the school. The vice principal is a tough disciplinarian: He suspends students for any rule violation and, despite pressure from the central administration to keep suspensions down, the suspension rate in the school is high. The school counselors would rather deal with some of the school's discipline problems, but the assistant principal views discipline as his bailiwick and he handles all discipline cases himself.

School A in 1981. School A was first assessed in the Spring of 1981; the profiles are shown in Figure 1. The quality control indicators imply that care was taken in the administration of the surveys: Surveys were completed by 34 teachers; 81% of those in the school; and by 226 students, 76% of those in the sample; the Invalidity scale average is low for the student survey, at the 11th percentile. The student response rate is a bit low, reflecting in part the attendance problems the school is having, but students completing the survey appear to have approached the task in a serious manner.

The overall elevation of the teacher psychosocial climate profile is on the low side of average, suggesting that this school is slightly on the uncomfortable side of average. This is typical of junior high schools, which tend to have more uncomfortable climates than most high schools.

The Safety scale is in the low portion of the average range, suggesting that the school has occasional problems in this area, but that they are not of an unusual magnitude. A visit to the school confirms this hypothesis. Occasionally staff take an ominous looking pocket knife from a student, but the halls are for the most part free of graffiti and, although students sometimes run in the halls and throw spit balls, the school is certainly not a threatening place.

The Morale scale suggests that morale is about average in this school. This hypothesis, too, is confirmed by attending a staff meeting. The staff have some complaints about heterogeneous abilities among the students in their classes, and they have gripes about the way discipline is handled, but everyone seems free to talk about these problems in a congenial manner. The conversation occasionally hits a tense spot — especially when it turns to the assistant principal's handling of discipline. Morale is high enough that it would not be difficult to work with this school on school improvement projects.

Several of the more specific climate scales are moderately low. These include (a) the Planning and Action scale (remember that the principal has been in this school for almost two decades, and she may not be anxious to start major school change projects); (b) the Smooth Administration scale (this fits with the faculty's, counselors', and central administration's reports that changes in the way the vice principal handles discipline are needed); (c) the Race Relations scale (the school is just settling down after the recent court-ordered desegregation); and (d) the Student Influence scale (the school has no student council and no one on the staff seems concerned about that). Given the talk one hears in this school about the need to get a school bond issue approved by the voters and the lack of amenities such as basketballs, it is interesting that the Resources scale is not lower than it is, but then resources like paper and pencils do not seem to be in short supply, and the school has a nice large library.

The elevation of the student psychosocial climate profile is slightly on the high side of average. The Safety scale suggests that the students are not concerned about their safety — perhaps they don't view an occasional pocket knife as a terrible threat. There are occasional fights, but the faculty seem to break them up before anyone gets hurt — and the fighting students won't be back in school for a few days once they visit the vice principal's office. The Respect for Students scale suggests that students in this school feel they are treated with about as much dignity as are students in the average school.

Two of the more specific climate scales are above average: Fairness of Rules is moderately high, and Clarity of Rules is high. This fits with other information about the school: Faculty can readily explain the discipline procedures to a visitor, there are forms that are filled out when there is a disciplinary incident, and it is clear that if a student breaks even a minor rule he or she is likely to be suspended — no matter who the student is. Student influence is at the low end of the average range; this fits with the low score on the teacher profile for Student Influence.

The most notable feature of the teacher population characteristics is the low score on Personal Security. This fits with the information from the teacher psychosocial climate profile that Safety is at the low end of the average range. But a visitor to this school does not get the impression that the school is a threatening place — at least if the

visitor has been in many urban junior high schools. If I were helping the school interpret this profile, I would ask the staff about the low score on the Personal Security scale. It may be that this low score is due to the nearly all white faculty's not yet being completely accustomed to the recently integrated school, or perhaps most of the "victimizations" are insulting remarks or gestures, or perhaps there is another explanation. It may be that the school has problems in this area, or it may be that the low score on Personal Security results from unrealistic expectations on the part of the staff. The meaning of this scale should be discussed until a satisfactory understanding is achieved.

Interaction with Students is at the low end of the average range, and faculty do admit that they are not as eager to spend time with students outside of class as they were when they were younger. Classroom orderliness is also at the low end of the average range. Some staff do complain that their classes are more heterogeneous than the classes they had been used to, and that this sometimes leads to disruption. Some teachers also say they are often unwilling to send misbehaving students out of class because they will likely be suspended. Finally, the Professional Development scale is moderately low. A fairly low score is commonly observed in schools where the faculty are older — they already have most of the credentials they will get, and after teaching for a while nothing much seems to be new anymore.

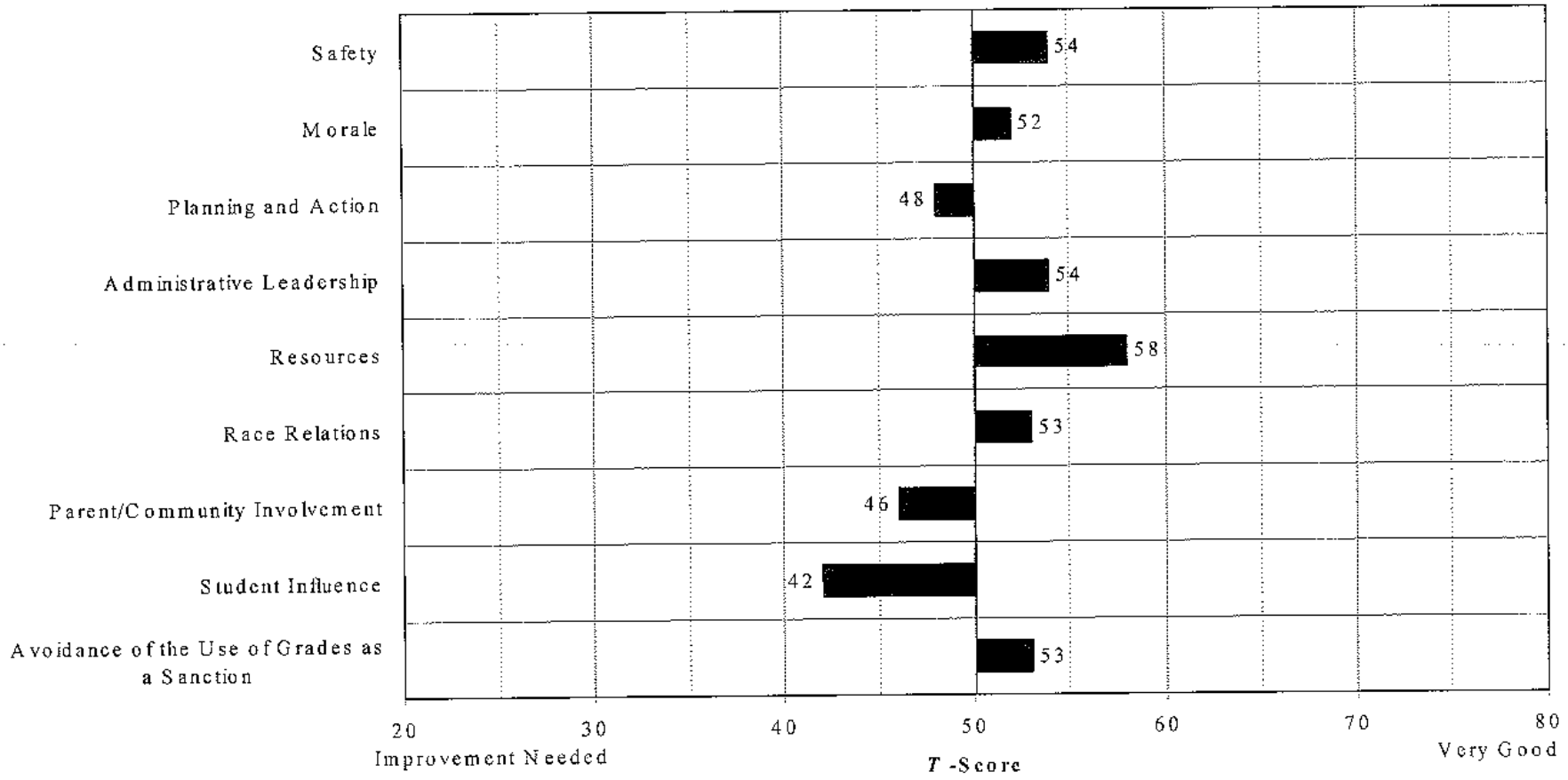
The profile of student population characteristics presents some interesting complexities. Average Parental Education is moderately high, and several indicators of personal integration are near the high end of the average range — Positive Peer Association, Educational Expectation, Social Integration, Belief in Rules, and Interpersonal Competency. But several measures of average student characteristics are moderately low — Attachment to School, Involvement, Positive Self-Concept, and School Rewards. School Effort is also near the low end of the average range. This pattern suggests that most students come from homes and communities that foster healthy psychosocial development, but that something about the school environment is dragging down both liking for school and self-concept. This interpretation seems to fit: The School Rewards scale is low; other evidence implies that a very high proportion of the school's students have been suspended; and there are very few extracurricular activities available (partly because of the financial pinch and partly because the bus leaves right after school). School staff think a large part of the explanation of the low score on Positive Self-Concept is the way disciplinary problems are handled by the vice principal. This hypothesis may or may not be correct, but it is worth exploring.

School A In 1983. Some interesting things happened in School A between 1981 and 1983. The vice principal left at the end of the school year in 1981, and he was replaced by a vice principal with a disciplinary philosophy more congenial to the other staff and the central administration. The suspension rate plummeted. The voters passed a school bond issue during the 1981-82 academic year. A local university started a collaborative school improvement project together with school personnel. The project got faculty and students involved in developing plans for school improvement. The faculty and administration pondered the climate assessments conducted in 1981, and the school started to implement some new plans. A student council was formed, and the students launched some fund raising activities that enabled them to buy basketballs and other athletic equipment. Dances were held. An in-school suspension room was created, and some changes were made in reading curricula for students with difficulties. A visitor to School A in 1983 gets the impression that this is a vital school — things are happening. The 1982-83 school year started out with a short teacher strike where the issue was job security, but it was quickly resolved when some additional guarantees were made to teachers concerning job security.

The climate profiles for School A in the Spring of 1983 are shown in Figure 2. The quality control indicators are reassuring: The student and teacher response rates were 76% and 81%, respectively, and the sample sizes are adequate; the student Invalidity scale score is low. The profiles can be interpreted with confidence that the surveys were well conducted.

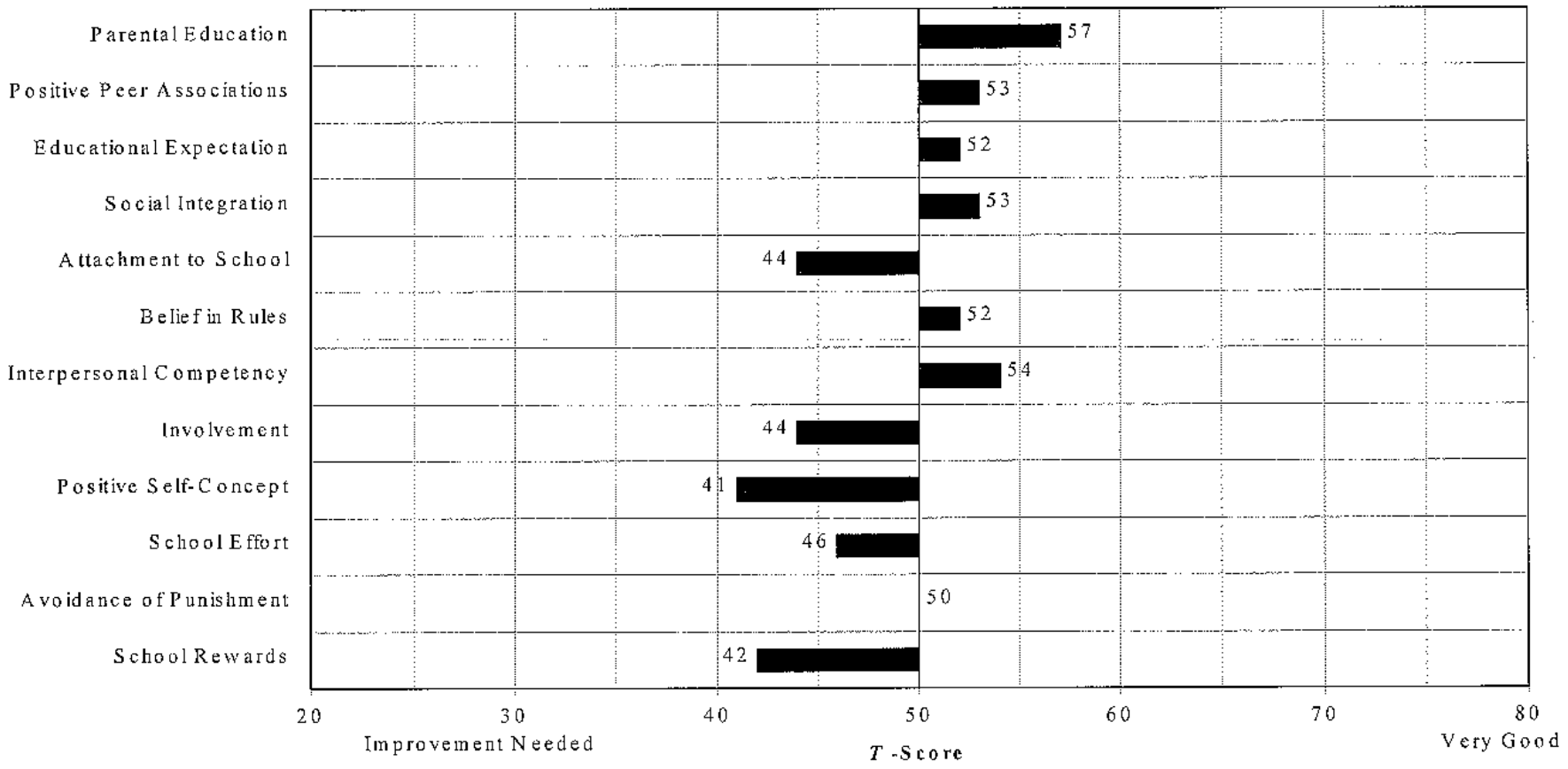
The overall elevation of the teacher psychosocial climate profile is noticeably higher than in 1981. Of the two general climate measures, Safety is more than two standard errors of measurement higher in 1983 than in 1981, and Morale is higher — but only one and a fifth standard errors higher. One can be confident that the teachers view the school as safer, but the apparent increase in Morale should be interpreted with caution. (These comparisons of climate measures from year to year are made using raw scores so that the differences can be compared with the standard errors.) As a rule of thumb, disregard differences smaller than one standard error of the difference, and interpret differences smaller than two standard errors with caution.

FIGURE 2a
School A in 1983
School Psychosocial Climate—Teacher Reports



Number of Surveys Scored = 29
Response Rate = 81%

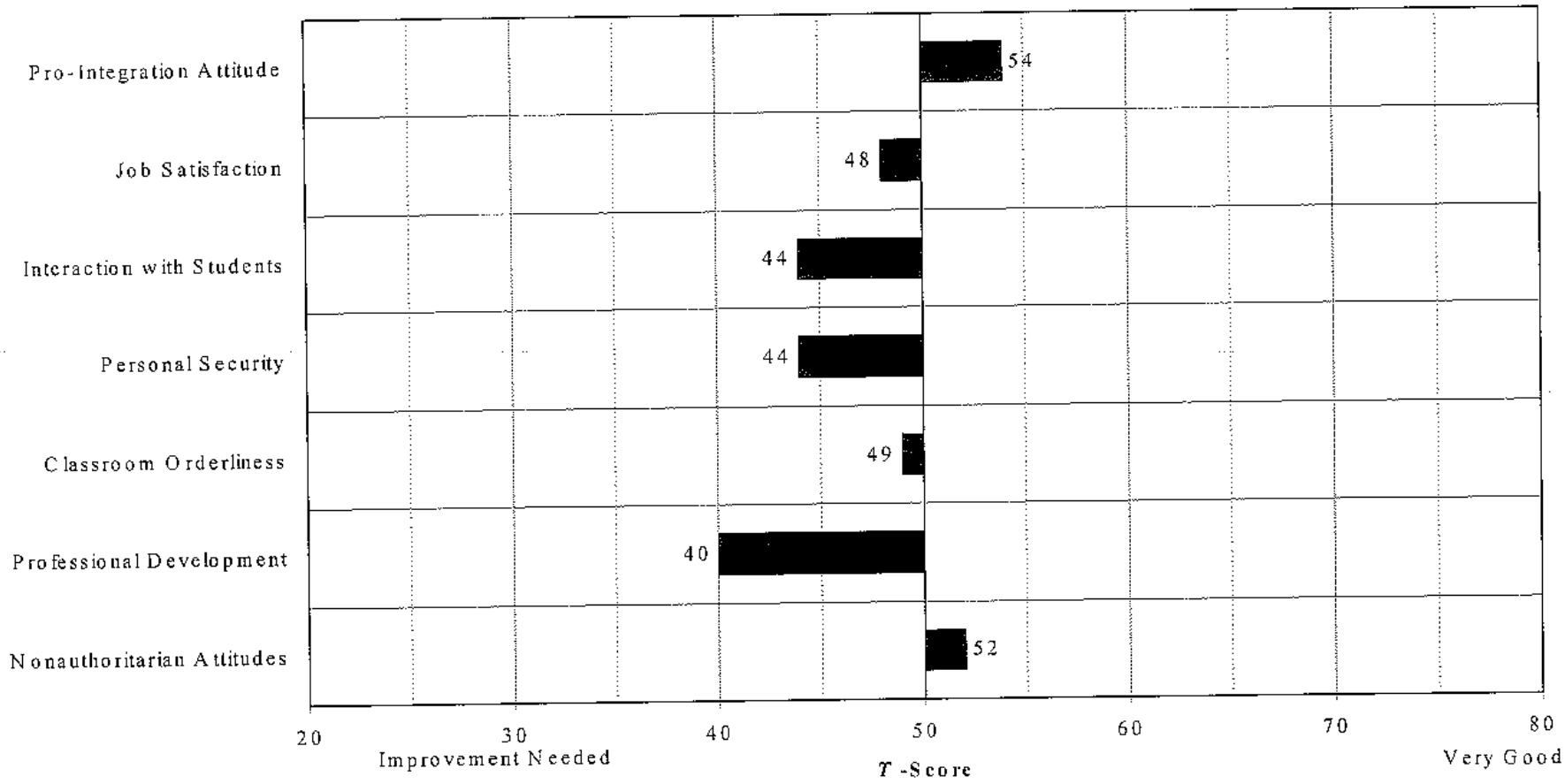
FIGURE 1d
School A in 1981
School Population—Student Characteristics



Invalidity index 11

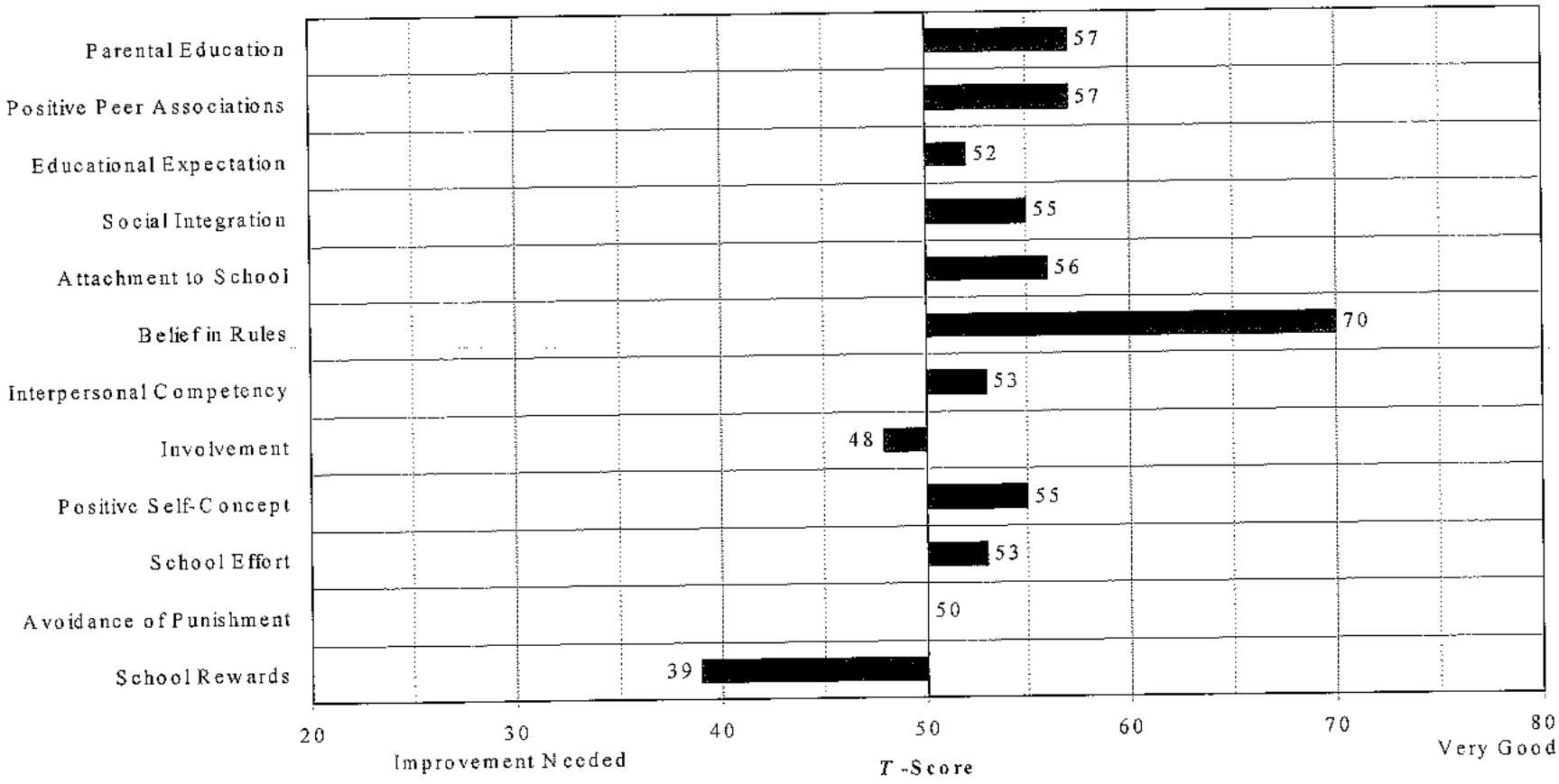
Number of Surveys Scored = 226
Response Rate = 76%

FIGURE 2c
School A in 1983
School Population—Teacher Characteristics



Number of Surveys Scored = 29
Response Rate = 81%

FIGURE 2d
School A in 1983
School Population—Student Characteristics



Invalidity index: 8

Number of Surveys Scored = 298
Response Rate = 76%

Two of the more specific climate scales show evidence of improvement. The Smooth Administration scale score has increased from the 27th to the 65th percentile, and the increase exceeds the standard error of difference by a factor of 2.37. Teachers clearly feel more comfortable with the administration and report that there is greater cooperation between administration and teachers in 1983 than they did in 1981. There is also improvement on the Race Relations scale; the difference exceeds one standard error of measurement but not two standard errors.

One wonders why the Student Influence scale shows no increase. After all, a student council was implemented. When questioned about this, school staff report that the student council that was implemented did not work out very well. A small number of students (fewer than 25) were selected by lot from homeroom classes, and this procedure did not result in the placement of genuine student leaders on the council. Furthermore, the principal was not really enthusiastic about creating a student council, and the students perceived that their suggestions were ignored. The continuing low score on Student Influence, combined with this information about the implementation of the student council, suggests that an alternative method of selecting student representatives be tried and that efforts be made to design important decision-making roles for the council.

The psychosocial climate profile based on student reports shows no substantial changes from the profile obtained two years earlier. Whatever improvements in school climate have occurred are apparently perceived primarily by the school's teachers, not its students. The Student Influence scale is still at the low end of the average range, supporting the information derived from the teacher profiles.

There are no significant changes in the measures of teacher population according to a simple t-test for each mean for the two years. Table 57 shows mean scores for each year. Although the mean scores are sometimes higher and sometimes lower in 1983 than 1981, little should be made of these small differences.

A number of differences in the measures of student population are worthy of note because a simple *t*-test shows them to be significant or almost so. Positive Peer Association is higher than in 1981, almost significantly so. Social Integration has increased, Attachment to School has increased, Belief in Rules has increased, and Positive Self-Concept has increased — all significantly, according to simple *t*-tests. In other words, over this two-year interval the degree to which the average student hangs out with positive peers has increased, alienation has gone down, liking for school has gone up, respect for conventional rules is up, and students view themselves more positively.

This is a portrait of strong positive change in the characteristics of this school's students. Taken together with the evidence from the other profiles, one gets the picture of a school that is improving. Teachers apparently see improvements in school

TABLE 57
Raw Scores for School A in 1981 and 1983

Scale	1981	1983
Teacher psychosocial climate		
Safety	3.46	3.81
Morale	1.55	1.61
Planning and action	1.49	1.55
Smooth administration	1.58	1.73
Resources	2.72	2.92
Race relations	1.33	1.53
Parent/community involvement	1.25	1.24
Student influence	1.37	1.35
Avoidance of the use of grades as a sanction	1.86	1.87
Student psychosocial climate		
Safety	.78	.79
Respect for students	1.08	1.04
Planning and action	.49	.46
Fairness of rules	.68	.68
Clarity of rules	.79	.81
Student influence	.35	.32
Teacher population		
Pro-integration attitude	3.04	3.11
job satisfaction	2.86	2.79
Interaction with students	2.17	2.12
Personal security	.80	.83
Classroom orderliness	2.58	2.67
Professional development	1.46	1.40
Nonauthoritarian attitude	2.61	2.65
Student population		
Parental education	2.50	2.50
Positive peer associations	.79	.82
Educational expectation	3.49	3.51
Social integration	.64	.70
Attachment to school	.63	.72
Belief in rules	.68	.77
Interpersonal competency	.80	.79
Involvement	.19	.21
Positive self-concept	.69	.75
School effort	.58	.62
Avoidance of punishment	.79	.79

climate that students do not notice, yet the improvements show up in individual student attitudes rather than in their perceptions of the school itself. This interpretation fits with the way the school improvement project was run as well as with other perceptions of this school. Teachers and administrators, not students, were involved in most of the planning for school improvement. Although students appear to have benefitted from the improvement program, they may not have been as aware of the efforts being made as were the teachers. The larger community was aware of the changes, however, especially after a local television station did a program on the positive changes wrought in the school.

It is not clear whether these changes should be attributed solely to the school improvement program, especially since there was an important change in the school's administration and a school bond issue was passed. But the pattern of results is consistent with this interpretation. This is especially true since another junior high in this community, which was also assessed both years (profiles not shown), did not show a similar pattern of improvement.

School B

School B is a massive high school, with about 3,500 students, in the urban portion of a major metropolitan area. In some respects the school resembles a fortress. Located in an area where delinquent gang activity is a tradition, the school's doors are locked shortly after the start of the school day to keep intruders out. Security police patrol the corridors on a full-time basis. Several years ago there were major disturbances in this school, but a new principal and special programs aimed at heading off violent confrontations were put in place and the school has been relatively calm for the past few years. This school is part of a huge educational bureaucracy that moves ponderously. In this system the principal runs his or her school with little meaningful interference or help from the central administration, and the principal of this school is concerned about and actively promotes efforts to make this formerly troubled school a safe place.

The ESB profiles for School B are shown in Figure 3. The teacher response rate is only 66%, implying that the profiles based on teacher reports should be interpreted cautiously. When response rates are low, it is usually the more apathetic and uninvolved teachers who fail to participate, and one can expect that profiles may look somewhat more positive than they would had a higher proportion of teachers participated. The student response rate is satisfactory, and the Invalidity scale average is in the acceptable range, implying that the student profiles can be interpreted with confidence.

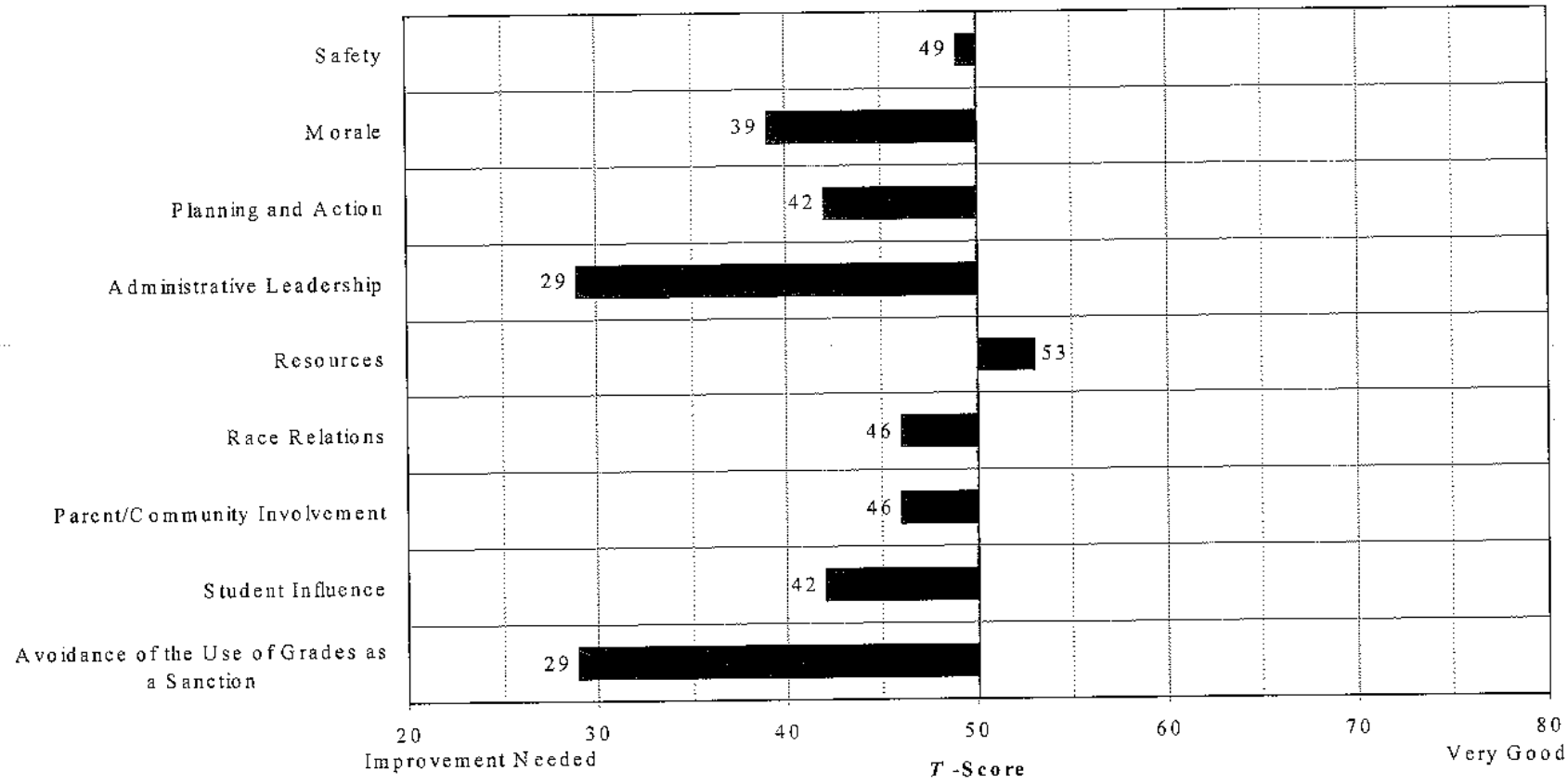
The overall elevation of the teacher psychosocial climate profile is low, implying that the teachers generally perceive the school to be an uncomfortable place. Despite the traditions of gang violence in the school's surrounds, and fighting gang members among the school's students, the teachers perceive the school to be about as safe as the average school. Probably the Safety scale is in the average range because of the priority placed on security in the school: It conducts regular hall sweeps to make sure students are not loitering around, secures its perimeter, and permanently locates security police in the school to arrest lawbreakers. Perhaps not the most palatable way to maintain security, these procedures are apparently effective. Morale, however, is low. This suggests that planning for school improvement would be an activity that teachers may not be enthusiastic about pursuing.

Two of the more specific psychosocial climate scales for School B are very low: Smooth Administration and Avoidance of Grades as a Sanction. This suggests that two places to start in discussing school climate improvement with this school are in these areas. The Smooth Administration scale is so low that persons trying to help this school may need to engage in team building activities, because animosity between the faculty and administration may be a major problem. It may be necessary to foster constructive communication between faculty and administration before anything else can be done. The very low score on Avoidance of Grades as a Sanction suggests that once faculty and administration are working together, they might start to explore ways to enrich the range of responses to student conduct that are available and used in the school.

The student psychosocial profile is a mixture of high and low scores. The Safety score is high. This reinforces the hypothesis derived from the teacher profile that the school is under control. The other general climate scale, Respect for Students, is in the average range. Taken together these two general scales imply that most students see the school as a reasonably comfortable place. The moderately low scores for Clarity of Rules and Student Influence are a cause for some concern, however, and suggest other areas where school improvement efforts might eventually focus.

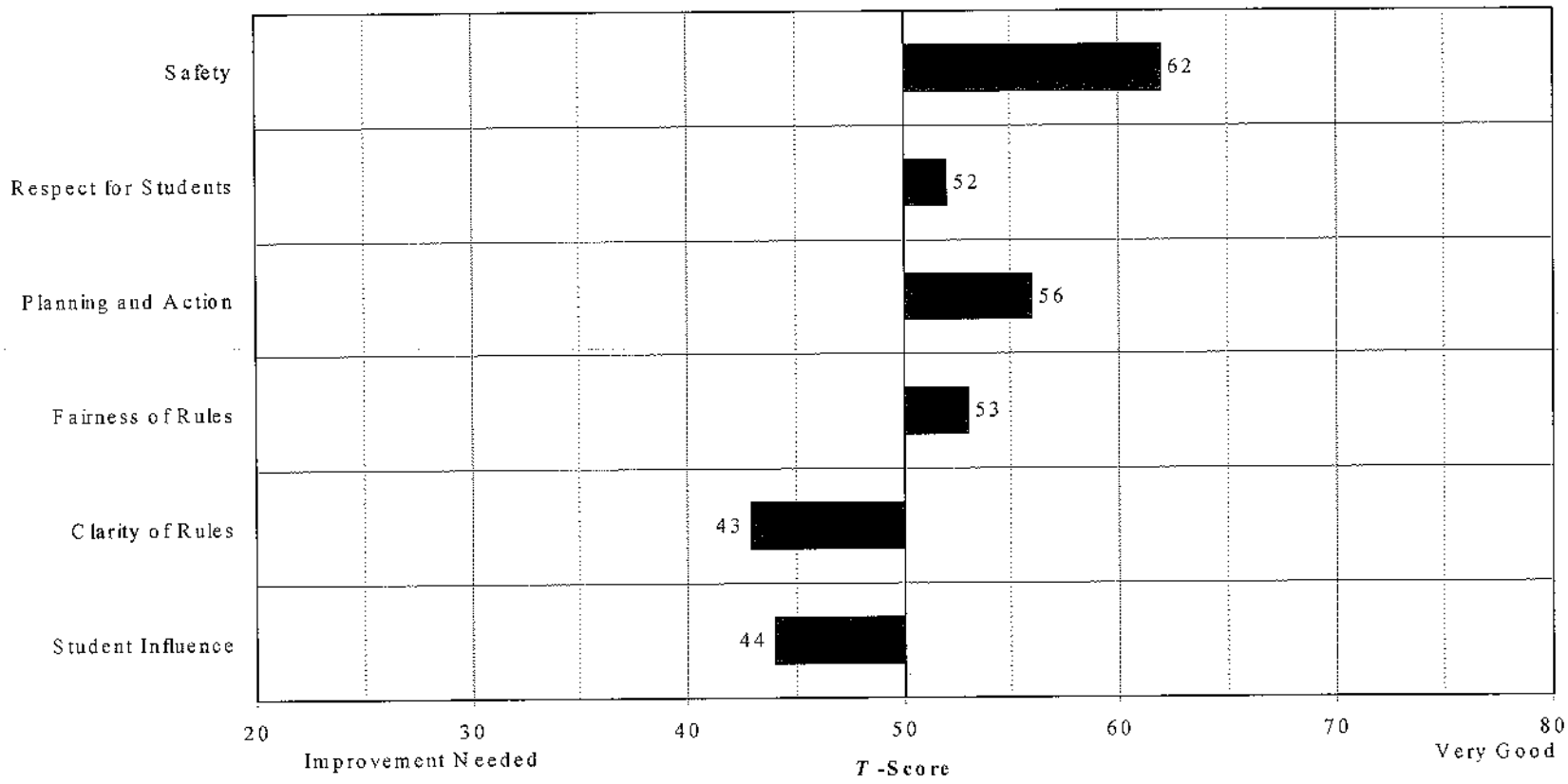
The profile of teacher population measures shows that the average teacher's attitude toward

FIGURE 3a
School B
School Psychosocial Climate—Teacher Reports



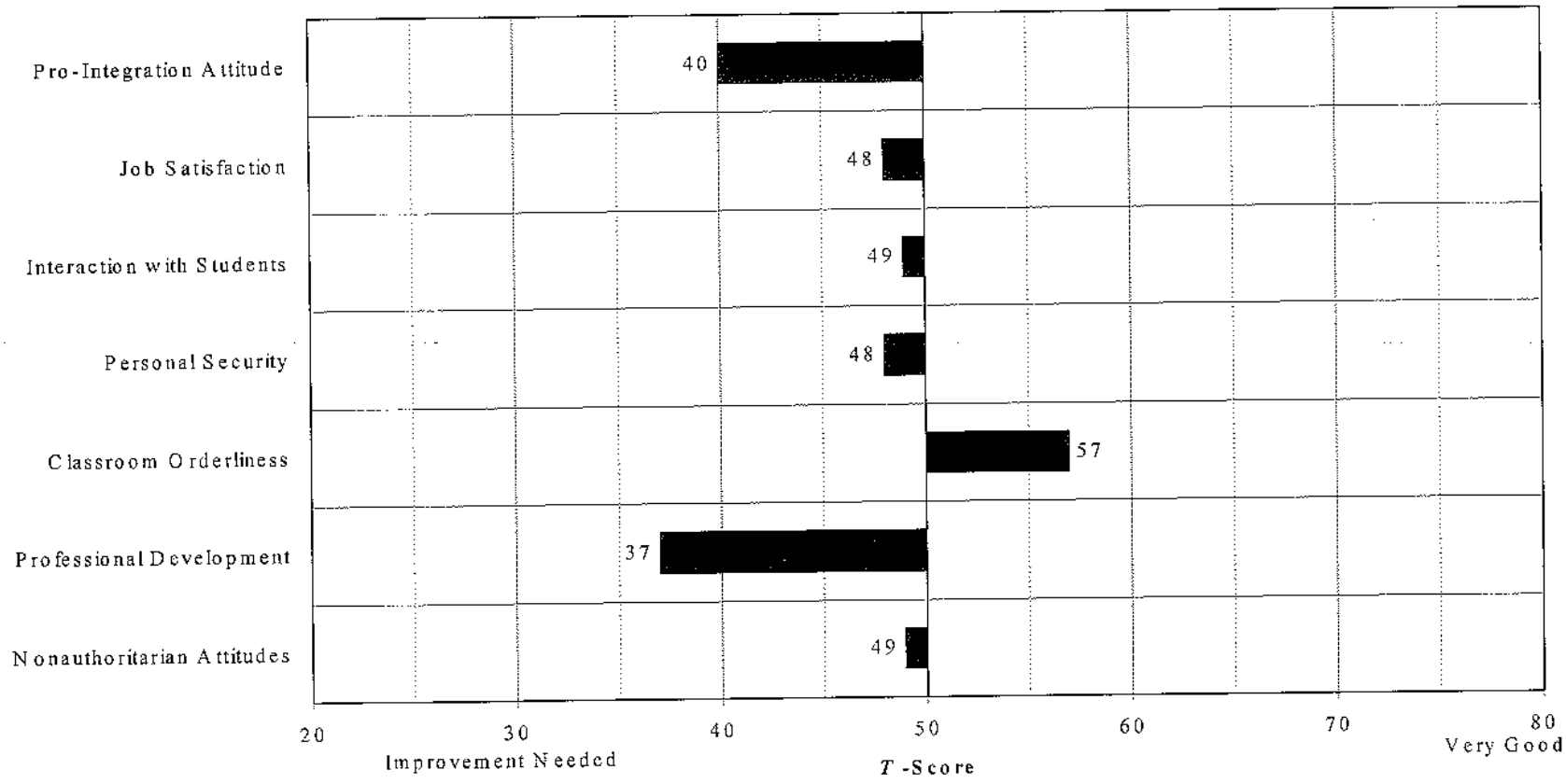
Number of Surveys Scored = 110
Response Rate = 66%

FIGURE 3b
School B
School Psychosocial Climate—Student Reports



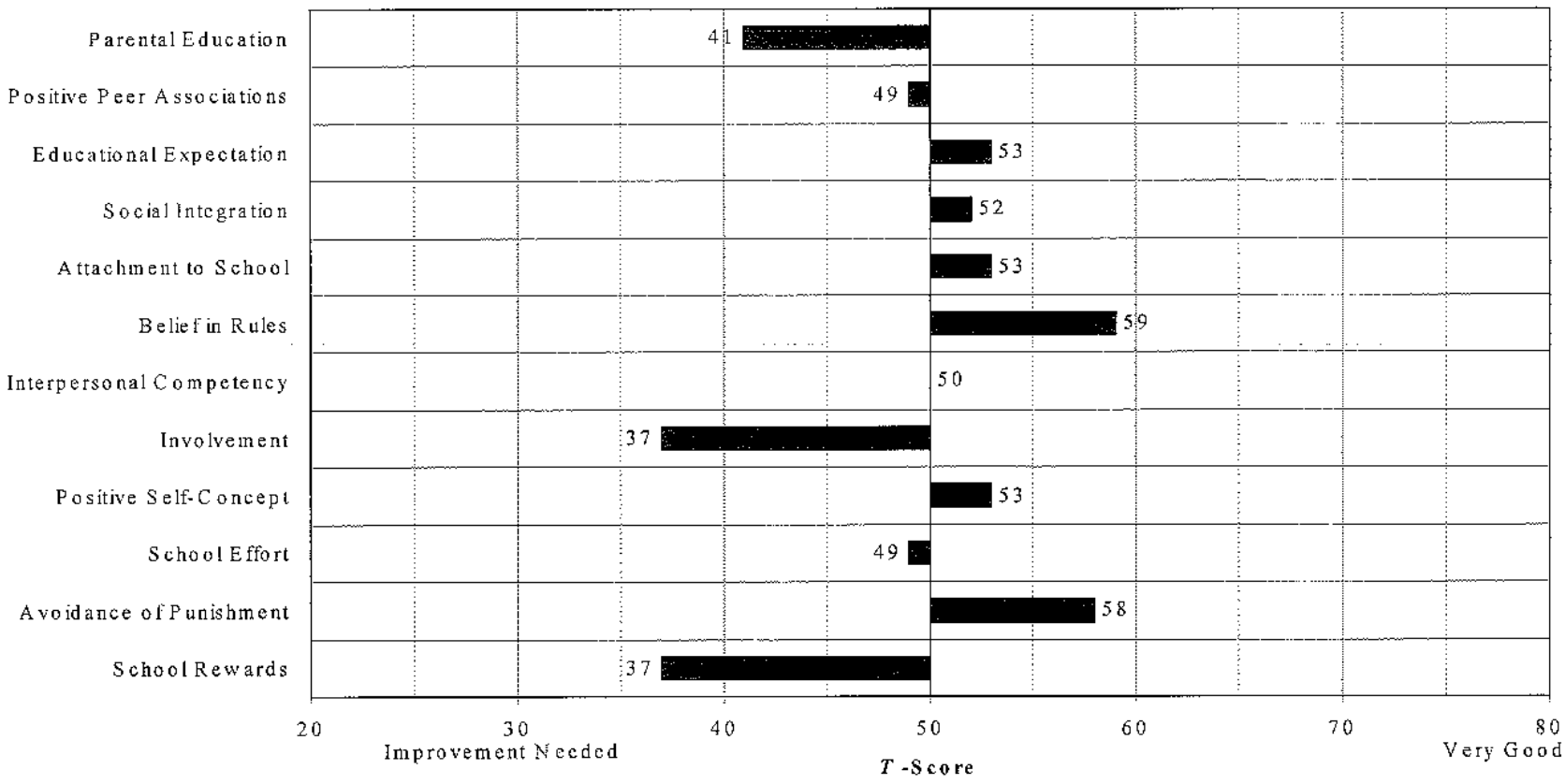
Number of Surveys Scored = 705
Response Rate = 82%

FIGURE 3c
School B
School Population—Teacher Characteristics



Number of Surveys Scored = 110
Response Rate = 66%

FIGURE 3d
School B
School Population—Student Characteristics



Invalidity index: 17

Number of Surveys Scored = 705
Response Rate = 82%

integration is moderately low, a potential problem because the Race Relations score on the teacher psychosocial climate profile was near the bottom of the average range and because this entire system is under the threat of court-ordered desegregation. The mean Professional Development score is low, implying that few teachers participate in much continuing education activity. The mean Classroom Orderliness scale is moderately high, one more indication that discipline is not much of a problem in this school at present.

The profile of student population characteristics for School B is marked by a low average on Parental Education. This low score is expected because most students in this inner city area come from working class families, many of which are on welfare. The moderately high average score on the Belief scale again supports the interpretation that this school is under control, as does the moderately high average score on the Avoidance of Punishment scale. The average scores on Involvement and School Rewards are both in the low range, however, suggesting that greater attention to positive ways of responding to student performance and conduct would help improve this school's climate. Extending the range of participation in extracurricular activities might well be a part of an attempt to broaden the ways this school responds to student conduct.

School C

School C is a junior high school in trouble. This 100% black school is located in a working class area. Last year one student was shot to death in school, and the carrying of weapons in the school is commonplace. Fights occur often. The principal hopes to retire soon. Far from seeming on top of the school's problems, the principal is not sure what the typical daily attendance is when asked. (It is low.) The central administration is concerned about this school. A major disturbance occurred a few years ago, and central administrators and community members alike are holding their breath in anticipation of more trouble. Students and young people who are not students roam throughout the school virtually at will; the major response of the principal to this intruder problem was to put chains on many of the doors to the building — a practice dispensed with once it came to the attention of the fire marshal. Staff turnover in School C is high, with many teachers putting in for transfers to other schools each year. The principal is not without some leadership potential. He is involved in a principal's association actively working to block the central administration's plan for principal evaluation.

The profiles for School C are shown in Figure 4. The teacher response rate is poor, implying that the profiles based on teacher reports should be interpreted with caution. The student response rate and the average Invalidity scale score imply that the student profiles can be interpreted with confidence.

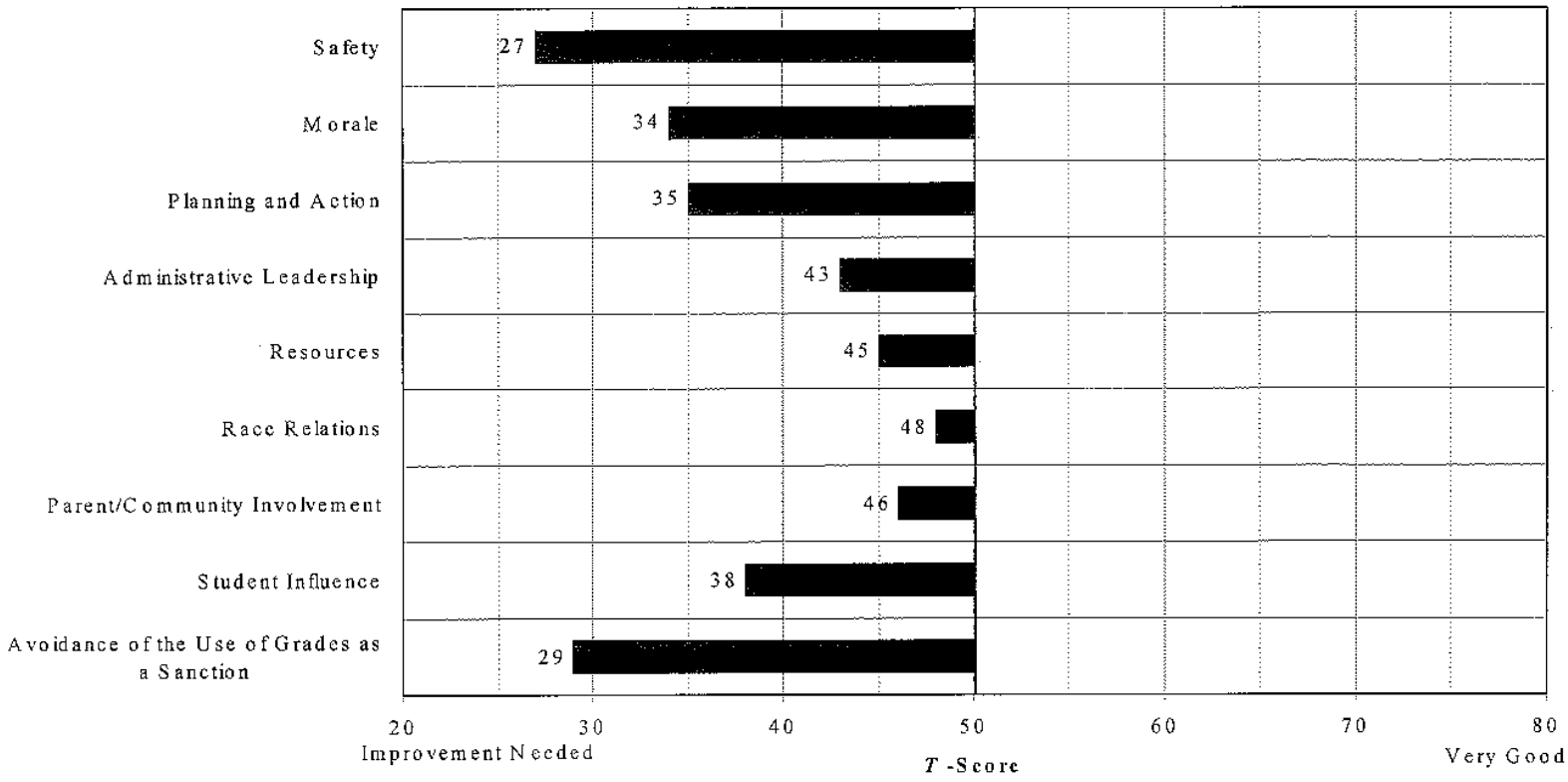
On the teacher psychosocial climate profile, both of the more global scales — Safety and Morale — are very low. In this case, the low teacher response rate, taken together with the low Morale score, reinforce the interpretation that morale is a major problem. This interpretation is further reinforced by the high staff turnover rate mentioned earlier. The low Morale score suggests that it will probably be very difficult to work with the staff in school improvement programs, but the low Safety scale and the generally low elevation of the entire profile imply that a school improvement program is desperately needed. None of the teacher psychosocial climate scales are above average, and three of the more specific climate measures are in the low or very low range. Unlike the pattern seen in School B's profile, the pattern in School C's profile suggests inaction rather than conflict between faculty and administration. The Planning and Action score is low, suggesting that little effort is expended on school improvement activities, and this interpretation fits with one's impression of the principal as a person waiting to retire. The highest score of all is the Race Relations scale, but this score has little meaning in a segregated school.

The student psychosocial climate profile confirms the interpretation that this school is a relatively uncomfortable place. Of the two general climate scales, Safety is in the low range, and Respect for Students in the moderately low range. Like teachers, students see little action: The Planning and Action score is low.

The profile of teacher population characteristics is marked by a very low average score on Job Satisfaction, and by low scores on Personal Security, Classroom Orderliness, and Professional Development.

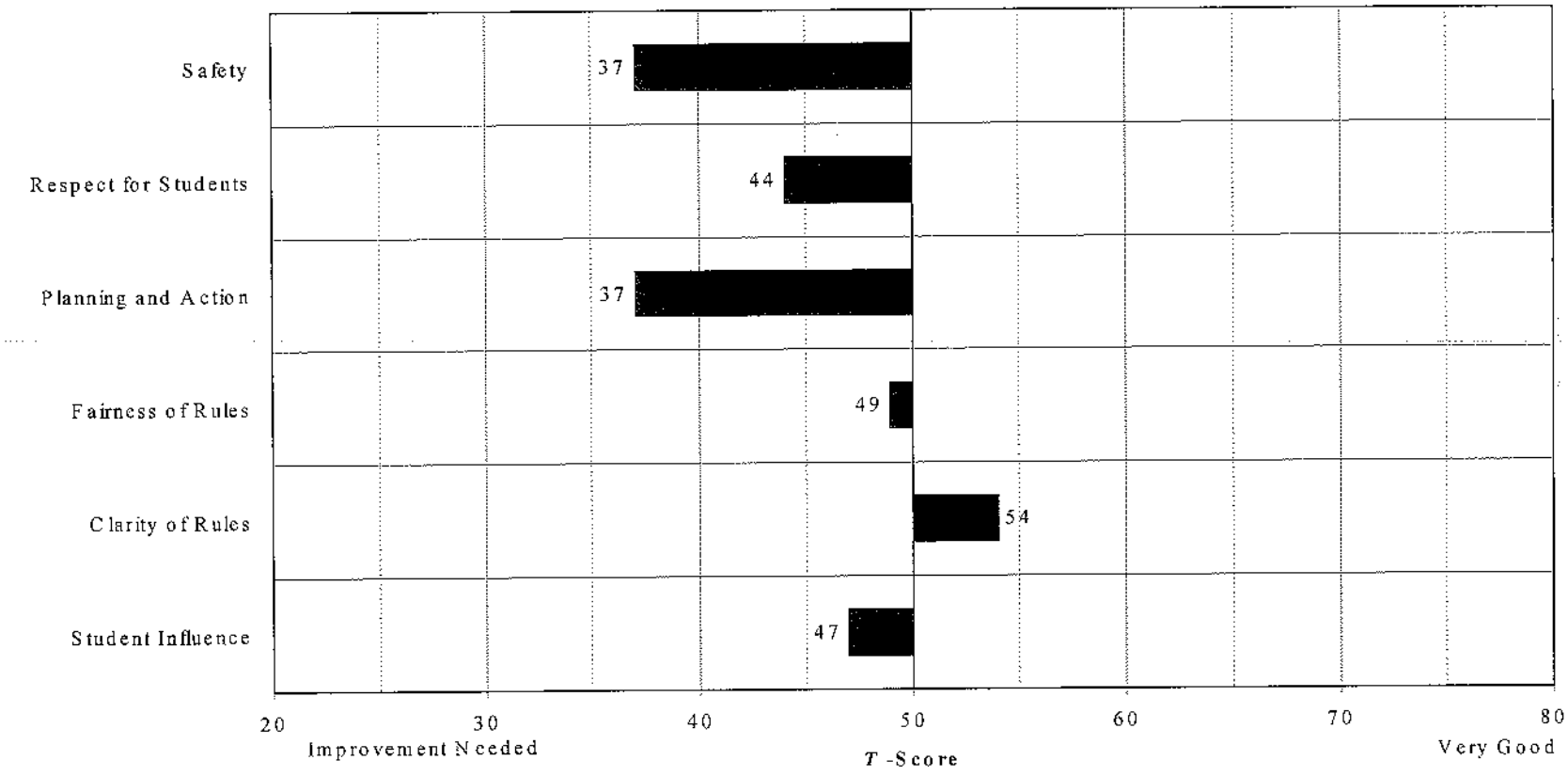
The profile of student characteristics shows that the parents of these students are about as educated as parents in the average school. The most striking features of this profile of student characteristics are the very low score on Social Integration and the very low score on Avoidance of Punishment. The average student is apparently very alienated and is often punished. Other evidence confirms that students are often punished — there were 84 disciplinary removals (informal suspensions for up to

FIGURE 4a
School C
School Psychosocial Climate—Teacher Reports



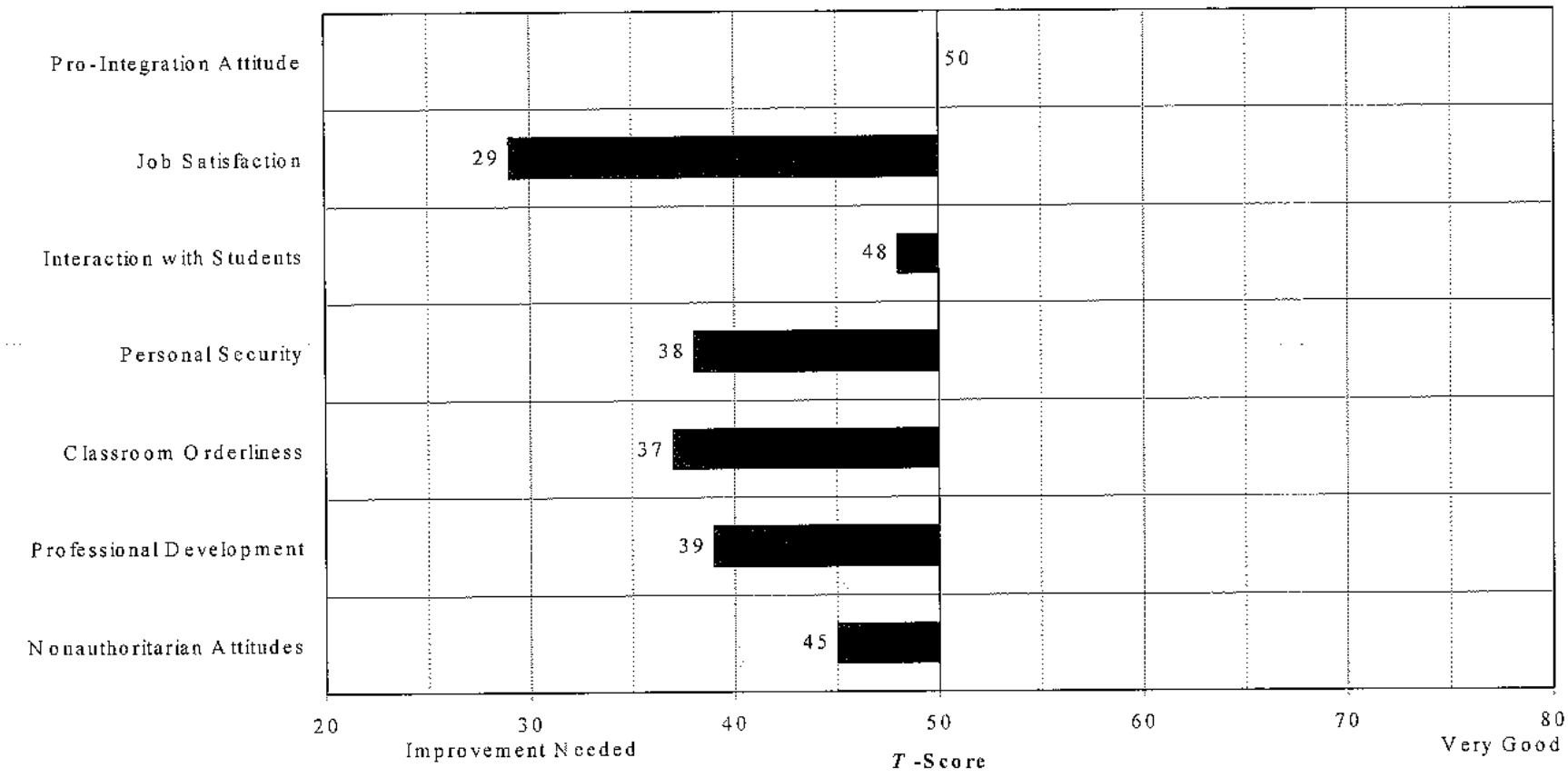
Number of Surveys Scored = 39
Response Rate = 39%

FIGURE 4b
School C
School Psychosocial Climate—Student Reports



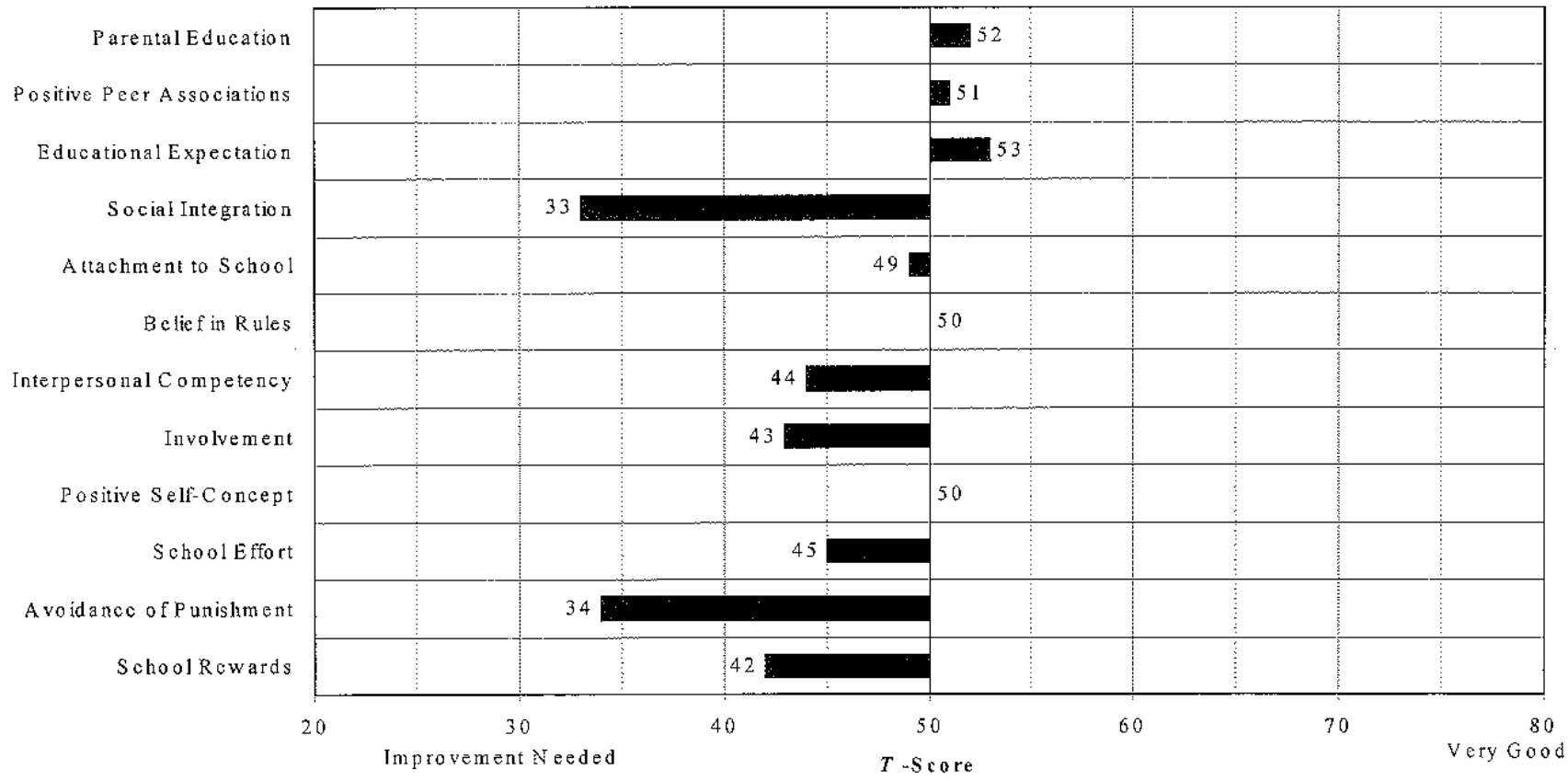
Number of Surveys Scored = 267
Response Rate = 89%

FIGURE 4c
School C
School Population—Teacher Characteristics



Number of Surveys Scored = 39
Response Rate = 39%

FIGURE 4d
School C
School Population—Student Characteristics



Invalidity index: 22

Number of Surveys Scored = 267
Response Rate = 89%

three days) per 100 students in the year the school was assessed.

Taken together, the profiles for School C imply that this school has multiple problems, that staff are demoralized and students alienated. The task for anyone trying to help this school improve its climate will be to kindle a fire under the administration and staff; to help set priorities for beginning school improvements; and to achieve some early successes, at least in small ways, to create the impression that something can be done to improve matters. When these profiles were initially discussed with the school staff, some interesting new evidence emerged that conflicts with part of the climate assessment results and supports other parts. Specifically, teachers had no difficulty in naming discipline as the number one problem. In contrast to the student psychosocial climate profiles (suggesting that rule clarity was at the high end of the average range), it became apparent from discussions with teachers and administrators that *they* did not know what the rules were.

School D

School D's profiles are discussed despite the unusual nature of this school, because it presents an interesting illustration of a nontraditional educational setting. School D is an alternative school run by a community-based organization out of a small storefront building in a large city. The neighborhood is regarded as one of the city's worst, and conflict between rival gangs is a major problem in the community. The public schools are rife with gang conflict, which often brings the operation of the schools to a halt for security reasons. The alternative school admits students whom the public schools are about to expel. Most of the students have extensive police records, and most are members of one fighting gang or another. The alternative school's principal and other staff are dedicated, talented people who are earnestly trying to help the students and their community.

To a visitor, this school sometimes seems a little chaotic — but not always. Graffiti sometimes appear, but they are quickly removed. Given the histories of most of the students, a little acting out behavior is not unexpected, however, and that most of the students are attending to the expected tasks most of the time is remarkable. The school has been declared "neutral territory," meaning that the school is not part of any gang's "turf." The display of gang symbols is discouraged, but not entirely prevented. But a gang symbol has a different meaning in the school than on the street: On the street a rival gang's emblem is grounds for a fight; in the school it is not.

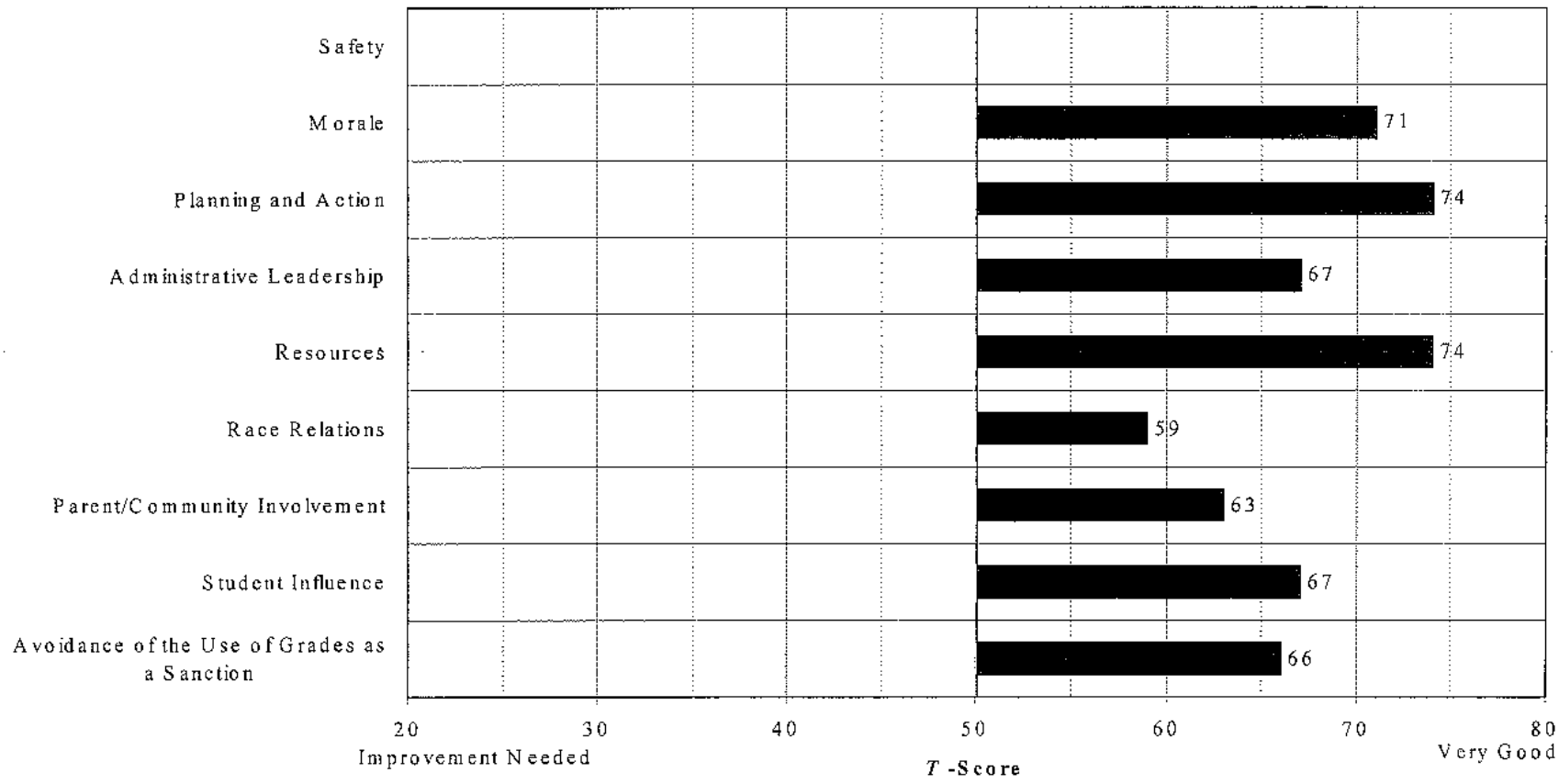
The profiles for School D are shown in Figure 5. The school has only five teachers, and three of them completed surveys. Clearly the profiles should be regarded as the reports of three people. Although it would rarely be appropriate to make much of a climate profile based on the reports of three people, this school's profile will be examined because of the school's special nature. The student profile is based on an adequate response rate but, because the school is small, the number of students is atypically small for a climate assessment. In general, the variability of scores based on small samples is greater than the variability of scores based on large samples, and it is not unusual to find more extremely high or extremely low scores in profiles based on only a few people's reports.

Both the teacher and student psychosocial climate profiles are marked by very high elevation. The three teachers see virtually everything about their school in a positive way. (No Safety score is shown on the teacher psychosocial climate profile because all three teachers left blank some items asking about the safety of places this tiny school did not have.) Students also see almost everything about the school's climate in positive terms; the lowest score is for the Safety scale which is about average. These profiles are remarkable because the students are the rejects from the public school system. One doubts that they would have had much positive to say about their former schools, and one doubts that the typical teacher in the public schools would enjoy having a classroom of these students. But the administration of this alternative school deliberately set out to create an environment in which these students would be comfortable. Reasoning that their previous attendance and conduct implied that they would learn little in the public schools, an attempt was made to design an environment that would be attractive enough to bring these students to school.

The profile of teacher characteristics also shows most scores at the high end. This profile is shown for completeness only; there is little to be gained by examining the characteristics of only three teachers.

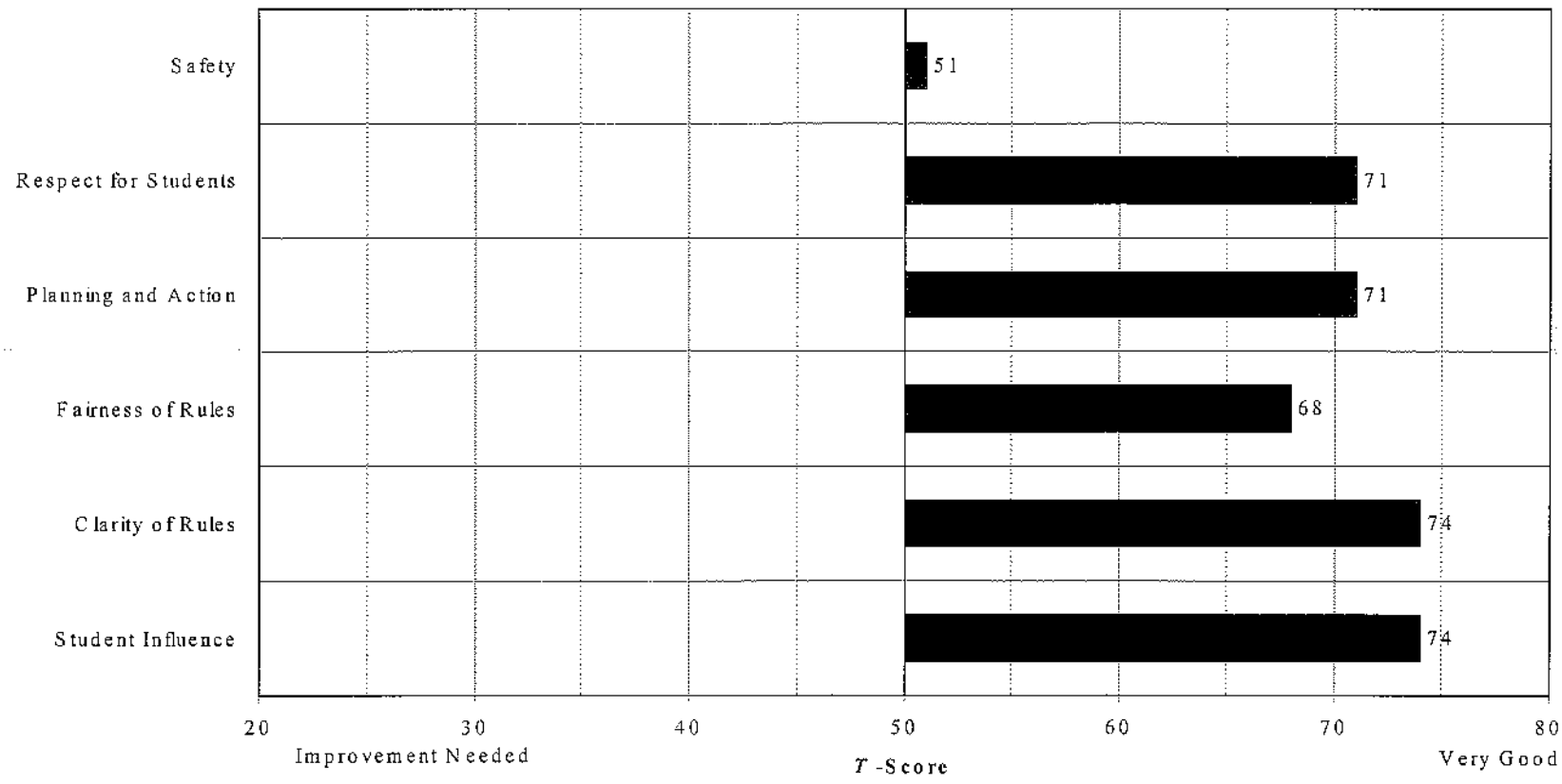
The profile of student characteristics is more interesting. It is a mixture of very high and very low scores that fits together with other available information about these youths and their school. First, the average Positive Peer Association score is very low — most of the youths are gang members. Second, the average Educational Expectation is low — these students were on the verge of being

FIGURE 5a
School D
School Psychosocial Climate—Teacher Reports



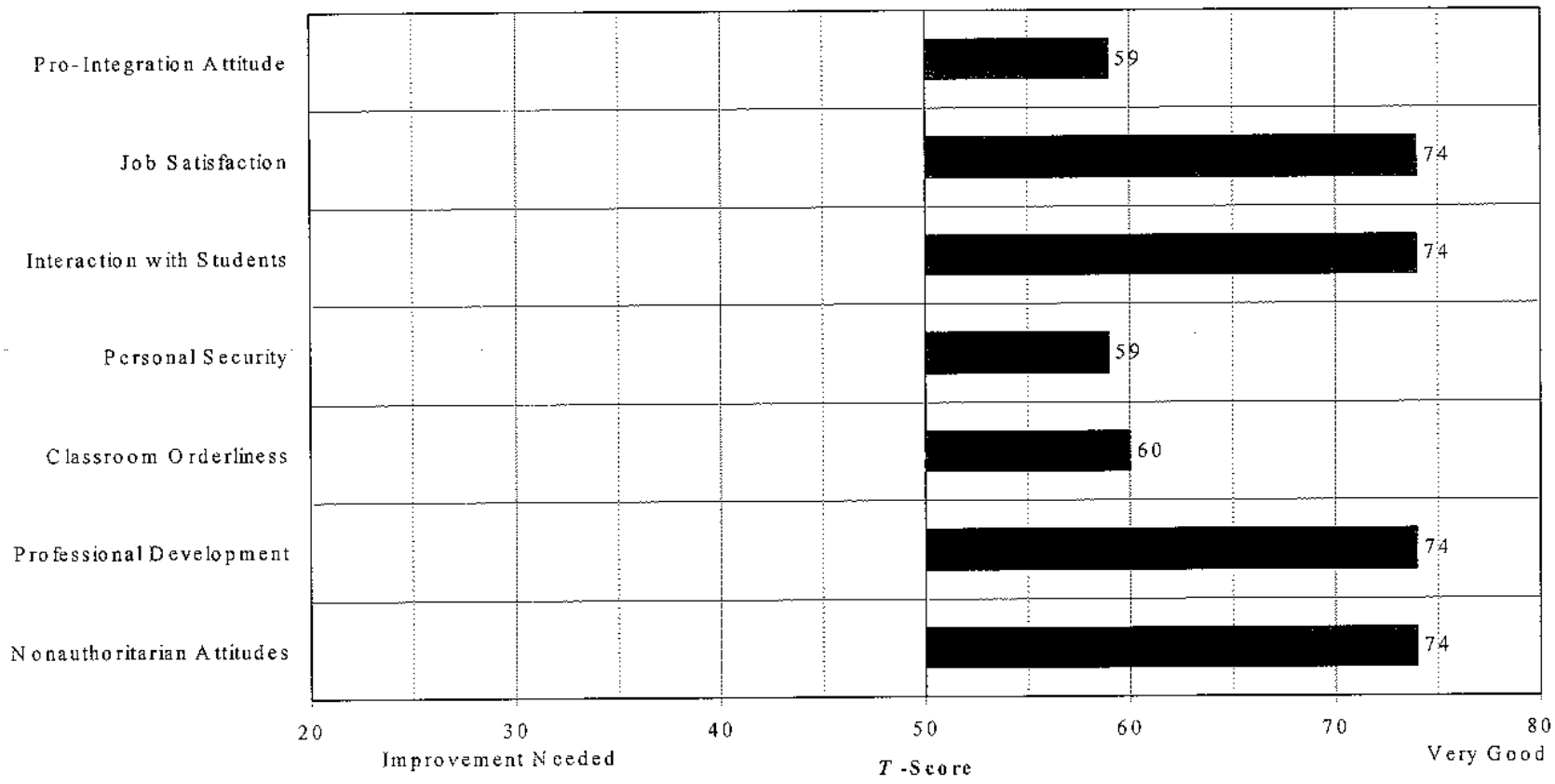
Number of Surveys Scored = 3
Response Rate = 60%

FIGURE 5b
School C
School Psychosocial Climate—Student Reports



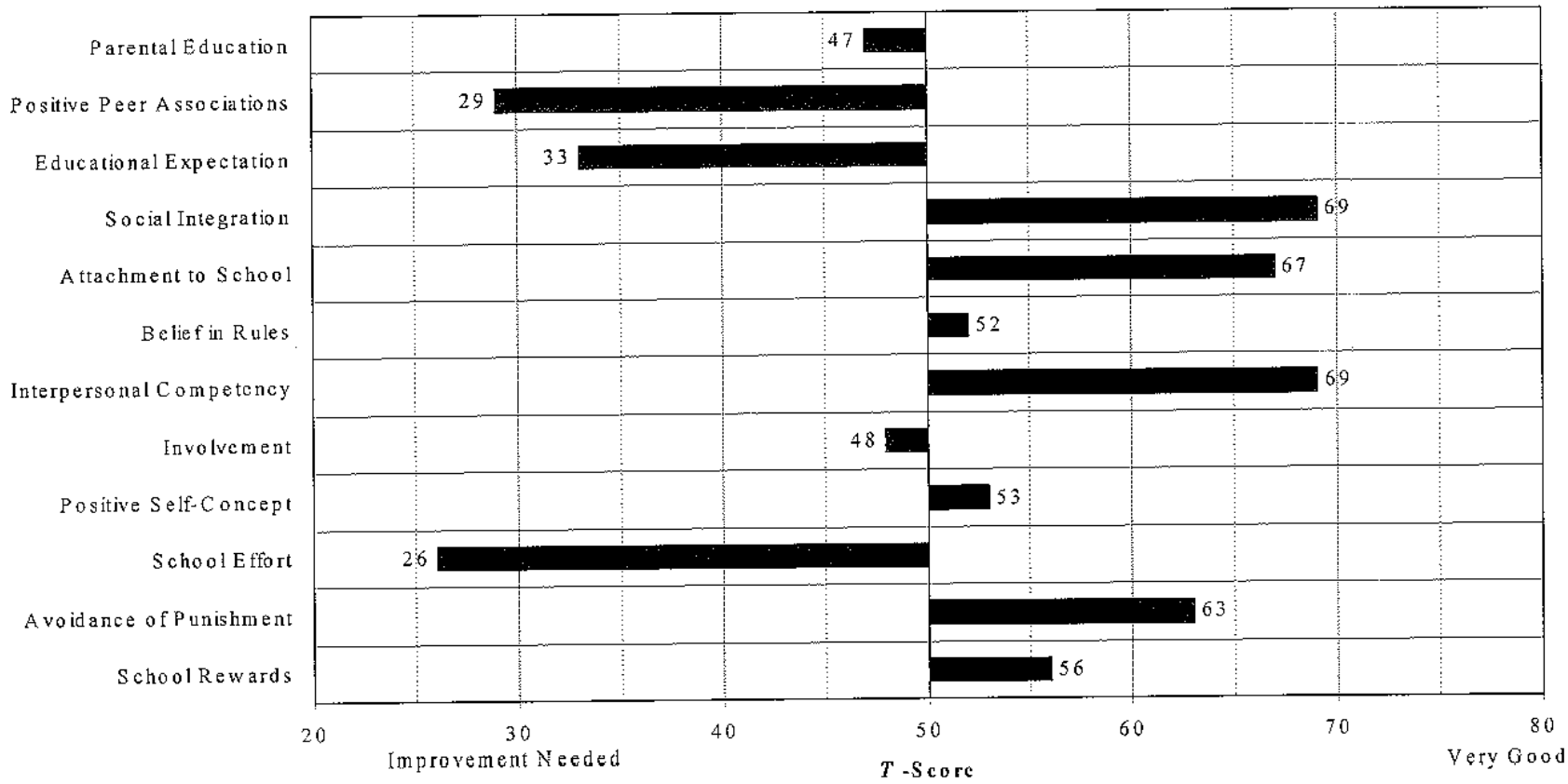
Number of Surveys Scored = 47
Response Rate = 81%

FIGURE 5c
School D
School Population—Teacher Characteristics



Number of Surveys Scored = 3
Response Rate = 60%

FIGURE 5d
School D
School Population—Student Characteristics



Invalidity index: 4

Number of Surveys Scored = 47
Response Rate = 81%

booted out of the public schools, and many of them will never graduate from high school. (The attrition from this alternative school was high, and most of this attrition was because the students were incarcerated following conviction for a crime.) Third, the average School Effort is very low. This fits with the impression that most of these students are impulsive and that staff emphasize participation in some meaningful activity rather than customary academic course work.

The very high average scores are also instructive. Despite the histories of these youths, the average Social Integration and Attachment to School scores are very high. When interviewed, students spontaneously report that they feel like they belong in this school and that the school is trying to help them. The Interpersonal Competency average is also very high, suggesting that these students may be extremely "street wise" despite their low levels of academic achievement. Finally, the average scores for Avoidance of Punishment and of School Rewards are high and moderately high, respectively. This fits with the observation that the alternative school's staff is trying to respond to student behavior in positive ways and to use rewards rather than punishment as a means of regulating student behavior.

Although it is not clear from the ESB profiles how much learning takes place in School D, it seems clear enough that the extremely nontraditional environment of this alternative school has been successful in creating a positive school climate.

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Appendix 1
Item Content of the Student Scales

The numbers shown next to response options for each item show how responses are scored.

Parental Education

12. How far did your father (or guardian) go in school?
    0 = 8th grade or less
    1 = Some high school
    2 = Finished high school
    3 = Some college or other schooling after high school
    4 = Finished college

13. How far did your mother (or guardian) go in school?
    0 = 8th grade or less
    1 = Some high school
    2 = Finished high school
    3 = Some college or other schooling after high school
    4 = Finished college

Positive Peer Associations

30. Most of my friends think getting good grades is important.
    True = 1 False = 0

31. Most of my friends think school is a pain.
    True = 0 False = 1

32. My friends often try to get me to do things the teacher doesn't like.
    True = 0 False = 1

Please think of your best friend in this school. As far as you know, are the following statements true or false about him or her?

	True	False
33. Is interested in school	1	0
34. Attends classes regularly	1	0
1. Plans to go to college	1	0
2. Belongs to a gang	0	1
37. Gets in trouble with the police	0	1

38. How many of your friends have been picked up by the police?

    1 = Don't know
    1 = None
    0 = One
    0 = Some
    0 = Most
    0 = All

Educational Expectation

11. As things stand now, how far in school do you think you will get?
    0 = Less than high school graduation
    1 = High school graduation
    2 = Vocational, trade, or business school after high school
    3 = Less than two years of college
    4 = Finish a two-year college degree
    5 = Finish a four- or five-year college degree or more

Social Integration

74. Teachers here care about the students.
    Agree = 1 Disagree = 0

75. 1 feel like I belong in this school.
    Agree Disagree = 0

96. Life in this town is pretty confusing.
    True = 0 False = 1

100. I feel no one really cares much about what happens to me.
    True = 0 False = 1

103. I often feel awkward and out of place.
    True = 0 False = 1

116. These days I get the feeling that I'm just not a part of things.
True = 0 False = 1

Attachment to School

How important is each of the following to you?

	Very important	Fairly important	Not important
66. What teachers think about you	1	0	0
67. The grade you get at school	1	0	0

How do you feel about the following?

	Don't like	Like
3. This school	0	1
69. The principal	0	1
70. The classes you are taking	0	1
71. The teachers	0	1
72. The counselors	0	1

73. 1 have lots of respect for my teachers.
Agree = 1 Disagree = 0

76. This school makes me like to learn.
Agree = 1 Disagree = 0

115. In classes I am learning the things I need to know.
True = 1 False = 0

Belief in Rules

92. I do not have much to lose by causing trouble in school.
True = 0 False =1

97. It is all right to get around the law if you can.
True = 0 False = 1

99. People who leave things around deserve it if their things get taken.
True = 0 False = 1

112. Taking things from stores doesn't hurt anyone.
True = 0 False = 1

114. It is O.K. to take advantage of a chump or a sucker.
True = 0 False = 1

118. Teachers who get hassled by students usually had it coming.
True = 0 False = 0

Interpersonal Competency

101. I have a clear picture of what I am like as a person.
True = 1 False = 0

106. 1 know how to get along with teachers.
True = 1 False = 0

108. If I want to, I can explain things well.
True = 1 False = 0

110. I find it easy to talk with all kinds of people.
True = 1 False = 0

111. My friends regard me as a person with good sense.
True = 1 False = 0

Involvement

Which of the following things have you spent time on this school term?

	Yes	No
14. Varsity or junior varsity athletic teams	1	0
15. Other athletic teams — in or out of school	1	0
16. Cheer leaders, pep club, majorettes	1	0

		Yes	No
17.	Debating or drama	1	0
18.	Band or orchestra	1	0
19.	Chorus or dance	1	0
20.	School clubs	1	0
21.	School newspaper, magazine, yearbook, annual	1	0
22.	Student council, student government, political club	1	0
23.	Youth organizations in the community, such as scouts, Y, etc.	1	0
24.	Church activities, including youth groups	1	0
25.	Helping out at school as a library assistant, office helper, etc.	1	0

Positive Self-Concept

4. How satisfied are you with the way you are doing in school?
   1 = Very satisfied
   1 = Somewhat satisfied
   0 = Somewhat dissatisfied
   0 = Very Dissatisfied

How do most other students in your school see you?

		Very	Some-what	Not at all
6.	A good student?	1	0	0
7.	A trouble maker?	0	0	1
8.	Successful?	1	0	0
9.	A loser?	0	0	1

91. I am the kind of person who will always be able to make it if I try.
    True = 1 False = 0

93. My teachers think that I am a slow learner.
    True = 0 False = 1

94. I do not mind stealing from someone — that is just the kind of person I am.
    True = 0 False = 1

95. I am not the kind of person you would expect to get in trouble with the law.
    True = 1 False = 0

107. Sometimes I think I am no good at all.
    True = 0 False = 1

113. I feel I do not have much to be proud of.
    True = 0 False = 1

117. I like myself.
    True = 1 False = 0

School Effort

5. Compared to other students, how hard do you work in school?

   1 = Much harder
   1 = Harder
   0 = Less hard
   0 = Much less hard

How true about you are the following statements?

		Nearly always true	Some-times	Nearly always false
26.	I turn my homework in on time	1	0	0
27.	My schoolwork is messy	0	0	1
28.	I don't bother with homework or class assignments	0	0	1
29.	If a teacher gives a lot of homework, I try to finish all of it	1	0	0

Avoidance of Punishment

58. Were you sent out of class for punishment?
    Yes = 0 No = 1

59. Did you have to stay after school as a punishment?
Yes = 0 No = 1

60. Did you get an extra assignment as a punishment?
Yes = 0 No = 1

School Rewards

56. Teachers say nice things about my classwork.
1 = Often
0 = Sometimes
0 = Hardly ever

57. Did you get to do something special as a reward?
Yes = 1 No = 0

61. Did you win an award or a prize because of your work in school?
Yes = 1 No = 0

63. Did you help win an award or a prize for your group or class because of your work in school?
Yes = 1 No = 0

62. Was your grade lowered on an assignment as a punishment?
Yes = 0 No = 1

Invalidity

98. I have never disliked anyone.
True = 1 False = 0

102. It is easy to get along with nasty people.
True = 1 False = 0

104. I read several whole books every day.
True = 1 False = 0

105. I sometimes get angry.
True = 0 False = 1

109. I like to have fun.
True = 0 False = 1

Appendix 2
Item Content of the Teacher Scales

Pro-Integration Attitude

72. Most black students are better off in all-black schools.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

73. Most white students are better off in all-white schools.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

74. The amount of prejudice against minority groups in this country is highly exaggerated.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

76. Students should not be bused to achieve racial balance.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

Job Satisfaction

19. How do you like your job?

    1 = I hate it.
    2 = I don't like it.
    3 = I like it.
    4 = I love it.

20. How much of the time do you feel satisfied with your job?

    4 = All the time.
    3 = Most of the time.
    2 = Some of the time.
    1 = Almost never.

21. How much do you think you like your job compared with other people?

    4 = No one likes his or her job better than I like mine.
    3 = I like my job better than most people like theirs.
    2 = I like my job about as much as most people like theirs.
    1 = I dislike my job much more than most people dislike theirs.

Interaction with Students

31. In the past *two weeks* have any students come to you to ask your advice on some problem they were having outside of class?

    1 = No.
    2 = Yes, one did.
    3 = Yes, two did.
    4 = Yes, more than two did.

How often do you engage in the following activities with students?

32. Tutoring individual students before or after school

    1 = Hardly ever
    2 = Sometimes
    3 = About once a week
    4 = Several times a week
    4 = Almost daily

33. Working with students on extracurricular activities

    1 = Hardly ever
    2 = Sometimes
    3 = About once a week
    4 = Several times a week
    4 = Almost daily

34. Taking students on field trips

    1 = Hardly ever
    2 = Sometimes
    3 = About once a week
    4 = Several times a week
    4 = Almost daily

35. Going to games, dances, and other student activities

    1 = Hardly ever
    2 = Sometimes
    3 = About once a week
    4 = Several times a week
    4 = Almost daily

36. Discussing students' personal problems with them

    1 = Hardly ever
    2 = Sometimes
    3 = About once a week
    4 = Several times a week
    4 = Almost daily

Personal Security

In the past month have any of the following happened to *you personally in this school?*

	Yes	No
54. Damage to personal property worth less than $10.00	0	1
55. Damage to personal property worth more than $10.00	0	1
56. Theft of personal property worth less than $10.00	0	1
57. Theft of personal property worth more than $10.00	0	1
58. Was physically attacked and had to see a doctor	0	1
59. Was physically attacked but not seriously enough to see a doctor	0	1
60. Received obscene remarks or gestures from a student	0	1
61. Was threatened in remarks by a student	0	1
62. Had a weapon pulled on me	0	1

Classroom Orderliness

51. How much of your time in the classroom is directed to coping with disruptive student behavior?
    4 = None of my time
    3 = Some time each day
    2 = About half of my time
    1 = Most of my time

52. How much does the behavior of some students in your classroom (talking, fighting, etc.) keep you from teaching?
    1 = A great deal
    2 = A fair amount
    3 = Not very much at all
    4 = Not at all

Professional Development

23. How often do you attend professional development courses that are half a day or more in length?
    2 = Several times a month
    1 = About once a month
    1 = Less than once a month

How much in-service training have you had in each of these areas in the last 12 months?

24. Teaching methods or curriculum content

    1 = None
    1 = About a half day
    2 = 1-2 days
    2 = 3-4 days
    2 = 5-6 days
    2 = 7-8 days
    2 = 9-10 days
    2 = 11 days or more

25. Interpersonal or intergroup relations

    1 = None
    1 = About a half day
    2 = 1-2 days
    2 = 3-4 days
    2 = 5-6 days
    2 = 7-8 days
    2 = 9-10 days
    2 = 11 days or more

In some school years, a teacher learns a lot about education, while in other years a teacher doesn't learn much. This year, have you learned much about:

	Yes	No
26. New materials, new kinds of texts, supplementary materials?	2	1
27. Theories of teaching reading?	2	1
28. Effective methods of maintaining discipline?	2	1
29. How to handle disruptive students?	2	1
30. How better to deal with heterogeneous classes?	2	1

Nonauthoritarian Attitudes

77. If a pupil uses obscene or profane language in school, it should be considered a moral offense.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

78. A few pupils are just young hoodlums and should be treated accordingly.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

79. The threat or use of physical punishment is an effective way of dealing with misbehaving students.

    1 = Strongly agree 3 = Disagree somewhat
    2 = Agree somewhat 4 = Strongly disagree

Appendix 3
Item Content of the psychosocial Climate Scales

Student Reports

Safety

Do you usually *stay away* from any of the following places because someone might hurt or bother you there?

		Ye s	No
77.	The shortest way to school	0	1
78.	Any entrances into the school	0	1
79.	Any hallways or stairs in the school	0	1
80.	Parts of the school cafeteria	0	1
81.	Any school restrooms	0	1
82.	Other places inside school building	0	1
83.	Other places on the school grounds	0	1

In this term in school, have you:

		Yes	No
84.	Had to fight to protect yourself?	0	1
85.	Seen a teacher threatened by a student?	0	1
86.	Seen a teacher hit or attacked by a student?	0	1

		Almost always	Some-times	Almost never
88.	How often do you feel safe while in your school building?	1	.5	0
89.	How often are you afraid that someone will hurt or bother you at school?	0	.5	1
90.	How often are you afraid that someone will hurt you *on the way* to or from school?	0	.5	1

Respect for Students

		Almost always	Some-times	Almost never
39.	Students are treated like children here	0	1	2
64.	Teachers treat students with respect	2	1	0
65.	Teachers do things that make students feel “put down”	0	1	2

Planning and Action

		Agree	Disagree
47.	The teachers and principal in this school make plans to solve problems	1	0
48.	This school hardly ever tries anything new	0	1

55. It is hard to change the way things are done in this school.
True = 0 False = 1

Fairness of Rules

		Almost always	Some-times	Almost never
41.	The school rules are fair	1	.5	0
56.	The punishment for breaking school rules is the same no matter who you are	1	.5	0

50. The principal is fair.
Agree = 1 Disagree = 0

Clarity of Rules

		Almost always	Some-times	Almost never
40.	Everyone knows what the school rules are	1	.5	0

51. The principal runs the school with a firm hand.
Agree = 1 Disagree = 0

	True	False
52. The teachers let the students know what they expect of them	1	0
53. The principal lets the students know what he or she expects of them	1	0

Student Influence

	Almost always	Some-times	Almost never
43. Students can get an unfair school rule changed	1	.5	0

	Agree	Disagree
44. The student government makes important decisions	1	0
45. Students have little say in how this school is run	0	1
46. Teachers sometimes change their lesson plans because of student suggestions	1	0

54. Students have helped to make the school rules.
True = 1 False = 0

Teacher Reports

Safety

50. In your opinion, how much of a problem are vandalism, personal attacks, and theft in your school?

5 = None or almost none
4 = A little
3 = Some
2 = Fairly much
1 = Very much

53. Since school started this year, how many times did you hesitate to confront misbehaving students for fear of your own safety?

5 = Never
4 = Once or twice
3 = A few times
2 = Many times
1 = Nearly all the time

At your school *during school hours*, how safe from vandalism, personal attacks and theft is each of the following places?

	Very unsafe	Fairly unsafe	Aver-age	Fairly safe	Very safe
63. Your classroom while teaching	1	2	3	4	5
64. Empty classrooms	1	2	3	4	5
65. Hallways and stairs	1	2	3	4	5
66. The cafeteria	1	2	3	4	5
67. The restrooms used by students	1	2	3	4	5
68. Locker room or gym	1	2	3	4	5
69. Parking lot	1	2	3	4	5
70. Elsewhere outside on school grounds	1	2	3	4	5

Morale

	True	False
91. Students here don't really care about the school	1	2
92. Our problems in this school are so big that it is unrealistic to expect teachers to make much of a dent in them	1	2
94. I feel my ideas are listened to and used in this school	2	1
95. I want to continue working with the kind of students I have now	2	1

Please indicate which of the following descriptors are mostly true of the teaching faculty of your school and which are mostly false about the faculty.

	True	False
105. Apathetic	1	2
106. Cohesive	2	1
108. Enthusiastic	2	1
109. Frustrated	1	2
112. Satisfied	2	1
113. Tense	1	2
115. Unappreciated	1	2

Planning and Action

22. How often do you work on a planning committee with other teachers or administrators from your school?

    2 = Several times a month
    2 = About once a month
    1 = Less than once a month

	True	False
84. The principal encourages experimentation in teaching	2	1
85. Teacher evaluation is used in improving teacher performance	2	1

Are the following statements mostly true or mostly false about the principal of your school?

	True	False
101. Planful	2	1
102. Progressive	2	1

Please indicate which of the following descriptors are mostly true of the teaching faculty of your school and which are mostly false about the faculty.

	True	False
107. Conservative	1	2
110. Innovative	2	1
111. Open to change	2	1
114. Traditional	1	2

Smooth Administration

17. Simple non-time-consuming procedures exist for the acquisition and use of resources.
    2 = Strongly agree 1 = Disagree somewhat
    2 = Agree somewhat 1 = Strongly disagree

In your opinion, how well do the following groups get along at your school?

	Not well	Fairly well	Very well
46. Teachers and administrators	1	1	2

	True	False
81. Administrators and teachers collaborate toward making the school run effectively	2	1
82. There is little administration-teacher tension in this school	2	1
83. Our principal is a good representative of our school before the superintendent and the board	2	1
86. The principal is aware of and lets staff members and students know when they have done something particularly well	2	1
87. Teachers or students can arrange to deviate from the prescribed program of the school	2	1
88. Teachers feel free to communicate with the principal	2	1
89. The administration is supportive of teachers	2	1
90. It is hard to change established procedures here	1	2

Are the following statements mostly true or mostly false about the principal of your school?

	True	False
96. Informal	2	1
99. Open to staff input	2	1

Resources

14. The school supplies me with the material and equipment I need for teaching.
    4 = Strongly agree 2 = Disagree somewhat
    3 = Agree somewhat 1 = Strongly disagree

15. This school building has the space and physical arrangements needed to conduct the kinds of programs we need.
    4 = Strongly agree 2 = Disagree somewhat
    3 = Agree somewhat 1 = Strongly disagree

16. The school's learning program extends to settings beyond the school building for most students.
    4 = Strongly agree 2 = Disagree somewhat
    3 = Agree somewhat 1 = Strongly disagree

18. Teachers and students are able to get the instructional materials they need at the time they are needed.
    4 = Strongly agree 2 = Disagree somewhat
    3 = Agree somewhat 1 = Strongly disagree

Race Relations

In your opinion, how well do the following groups get along at your school?

	Not well	Fairly well	Very well
44. Students of different races	1	1	2
45. Students of different nationalities	1	1	2

Parent/Community Involvement

6. How much influence on school policies or practices does a PTO have?

    1 = None or no PTO
    1 = Weak
    2 = Strong
    2 = Very strong

	Often	Some-times	Seldom
7. Parents help to decide about new school programs	2	1	1
8. Parents serve as tutors or aids in the classroom	2	1	1
9. Community involvement is sought in developing the school's goals	2	1	1

In your opinion, how well do the following groups get along at your school?

47. Parents and teachers.
    1 = Not well
    1 = Fairly well
    2 = Very well

93. Parents and the community are receptive to new ideas.
    True = 1 False = 0

Student Influence

10. I often change my lesson plans based on student suggestions.
    True = 1 False = 0

37. Teachers and their students work together to make rules governing behavior in the classroom,
    1 = Strongly disagree 2 = Agree
    1 = Disagree 2 = Strongly agree

39. Students can get an unfair school rule changed.
    1 = Strongly disagree 2 = Agree
    1 = Disagree 2 = Strongly agree

40. Students help to make the school rules.
    1 = Strongly disagree 2 = Agree
    1 = Disagree 2 = Strongly agree

80. Students should have a lot to say about how the school is run.
    2 = Strongly agree 1 = Disagree somewhat
    2 = Agree somewhat 1 = Strongly disagree

Avoidance of the Use of Grades as a Sanction

11. When a student misbehaves *in my class*, I sometimes lower his or her grade.
    True = 1 False = 2

43. In your dealings with misbehaving students how often do you lower their grades if misconduct is repeated?
    2 = Very seldom
    2 = Seldom
    1 = Often
    1 = Very often

Appendix 4
Using the ESB Teacher Questionnaire with Elementary Schools

Although the Effective School Battery was initially developed for use with middle, junior, and high schools, school systems occasionally wish to use the teacher instruments in elementary schools. Provided that special allowance is made for some expected differences in the profiles of elementary and secondary schools is made, the ESB teacher instruments provide useful information about elementary schools.

In general, elementary schools tend to earn higher scores on the psychosocial climate scales ─ considerably higher on Safety, for example. In general also, the items in the Interaction with Students scale on the teacher population profile tend to be lower in elementary schools ─ probably because the item content of this particular scale is more appropriate for the higher educational levels.

For an illustration of the application of ESB teacher instruments in elementary schools, see *School Climate, Academic Performance, Attendance, and Dropout* (Report No. 43), Center for Research on Elementary and Middle Schools, Johns Hopkins University, 1989.

The data on the following page show ESB scores for a sample of 44 elementary schools with a sample of secondary schools described in the User's Manual. The elementary schools are all drawn from a moderately large county-wide school district in the southeastern United States.

Normative Data, ESB Teacher Profiles–Elementary Schools Compared to Secondary Schools

Teacher Population Scale	Secondary Schools (*N*=49)		Elementary Schools (*N*=44)	
	M	***SD***	***M***	***SD***
Pro-integration attitude	3.04	.24	2.96	.18
Job satisfaction	2.86	.24	2.90	.17
Interaction with students	2.21	.32	1.99	.15
Personal security	.88	.06	.92	.05
Classroom orderliness	2.77	.30	2.87	.22
Professional development	1.51	.13	1.53	.09
Nonauthoritarian attitude	2.70	.34	2.66	.21

Teacher Climate Scale	Secondary Schools (*N*=41)		Elementary Schools (*N*=43-44)	
	M	***SD***	***M***	***SD***
Safety	3.71	.43	4.34	.33
Morale	1.57	.16	1.70	.13
Planning & action	1.55	.11	1.70	.10
Smooth administration	1.67	.15	1.74	.13
Resources for instruction	2.53	.45	2.70	.38
Race relations	1.46	.23	1.69	.18
Parent and community involvement	1.27	.11	1.42	.18
Student influence	1.43	.14	1.51	.09
Avoidance of grades as sanction	1.85	.09	1.97	.04

Appendix 5
More Recent Research

This appendix briefly describes some of the research performed using the ESB since the initial publication of the manual.

Gottfredson, D. C. (1985). Youth employment, crime, and schooling: A longitudinal study of a national sample. *Developmental Psychology, 21,* 419-432.

Measures from the ESB were used in a study of the effects of youth employment on youth behavior.

Gottfredson, D. C., Hybl, L. G., Gottfredson, G. D., & Casteñeda, R. P. (1986). *School climate assessment instruments: A review* (Report No. 363). Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools. (ERIC No. ED 278 702)

Summarizes the content of instruments (including the ESB) used in school improvement projects, general characteristics of the instruments, utility of the information yielded, and the psychometric properties of the instruments.

Gottfredson, D. C., Hybl, L. G., Gottfredson, G. D., & Castañeda, R. P. (1987). School climate assessment instruments: A review. In H. J. Freiberg, A. Driscoll, & S. Knight (Eds.), *School climate* (pp. 49-81). Bloomington, IN: Phi Delta Kappa.

A briefer version of the 1986 technical report with the same title.

Gottfredson, D. C. (1986). An empirical test of school-based environmental and individual interventions to reduce the risk of delinquent behavior. *Criminology, 24,* 705-731.

The ESB was used in the evaluation of a multi-school program to prevent problem behavior.

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