DOCUMENT RESUME

ED 389 805 UD 030 724

AUTHOR Wang, Margaret C.; And Others
TITLE Effective Practices and Policies: Research and Practitioner Views. Publication Series #95-8.
INSTITUTION Temple Univ., Philadelphia, PA. National Education Center on Education in the Inner Cities.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 95
NOTE 60p.; Paper originally presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 1995).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

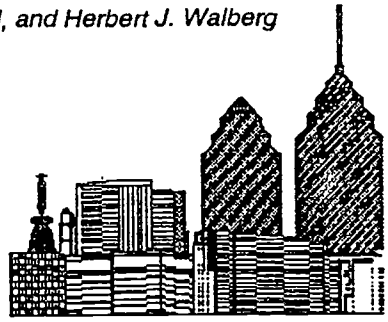
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Administrators; Educational Assessment; Educational Planning; Educational Policy; *Educational Practices; Educational Research; *Educational Researchers; *Evaluation Methods; Outcomes of Education; Program Development; Program Implementation; *Research Utilization; *School Effectiveness

ABSTRACT

In a survey of educational researchers, school and district administrators, and policymakers, 1,818 respondents rated educational practices and policies according to their influence on learning and assessability. Classroom practices, design and delivery of curriculum, and schoolwide practices were rated as more influential than federal, state, and district policies; however, the latter were rated as more assessable. In general, researchers and practitioners agreed about which practices and policies are influential but not about their assessability. Practices and policies rated both influential and assessable are the most feasible for use in educational planning and evaluation; those rated influential but less assessable call for development of new observational measures. This survey data can be used to guide local program development, assessment development, and the monitoring of program implementation and evaluation of outcomes. (Contains 8 tables, 2 figures, and 47 references.) (Author)

Effective Practices and Policies: Research and Practitioner Views

by Margaret C. Wang, Geneva D. Haertel, and Herbert J. Walberg

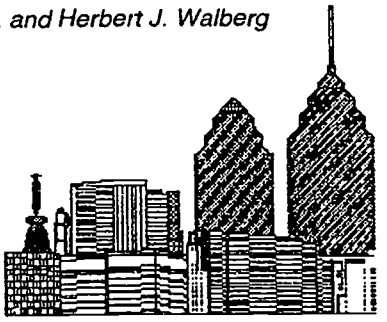


The National Center on Education in the Inner Cities

Temple University Center for Research in Human Development and Education

Effective Practices and Policies: Research and Practitioner Views

by Margaret C. Wang, Geneva D. Haertel, and Herbert J. Walberg



The National Center on
Education in the Inner Cities

This paper was originally presented at the annual meeting of the American Educational Research Association, April 1995, San Francisco, California.

The research reported herein was supported in part by the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education through a grant to the National Center on Education in the Inner Cities (CEIC) at the Temple University Center for Research in Human Development and Education (CRHDE). The opinions expressed do not necessarily reflect the position of the supporting agencies, and no official endorsement should be inferred.

 # 95-8

Abstract

In a survey of educational researchers, school and district administrators, and policymakers, 1,818 respondents rated educational practices and policies according to their influence on learning and assessability. Classroom practices, design and delivery of curriculum, and schoolwide practices were rated as more influential than federal, state, and district policies; however, the latter were rated as more assessable. In general, researchers and practitioners agreed about which practices and policies are influential but not about their assessability. Practices and policies rated both influential and assessable are the most feasible for use in educational planning and evaluation; those rated influential but less assessable call for development of new observational measures. This survey data can be used to guide local program development, assessment development, and in the monitoring of program implementation and evaluation of outcomes.

Effective Practices and Policies: Research and Practitioner Views

Since *A Nation at Risk* (National Commission on Excellence in Education, 1983), public attention and efforts to reform schools have focused on improving students' achievement. Identifying practices and policies that enhance learning serves the interests of all stakeholders--parents, educators, and policymakers. Indeed, the education landscape of the 1980s and 1990s has been dominated by reform efforts.

Research on what makes learning more effective provides a knowledge base to improve conventional practices. Research-based practices and policies can improve the capacity of schools for student achievement. Calls to upgrade the nation's teaching corps, to set standards, and to improve student learning underscore the need to bring what is known about learning into the reform agenda. Toward that end, this paper reports the findings from a survey of educators' and researchers' judgments about practices and policies that influence student learning and the degree of assessability of those learning influences. Several developments that provided the impetus for the survey are discussed in the next two sections. They show the need for research-based information on assessable policies and practices that work effectively.

Raising Standards

Standard setting has become the most visible activity in the educational reform movement. Beginning with the National Council of Teachers of Mathematics' *Curriculum and Evaluation Standards for School Mathematics* (1989), professional education organizations developed content standards that would influence curricula, assessment practices, and instructional delivery. States and school districts participated with the various standard-setting efforts in mathematics, science, English, language arts, history, and geography. Fuhrman and Elmore (1994) reported that in 1989 and 1990, the National Governors Association worked with former President Bush in "calling for, establishing, and promoting a set of national education goals" (p. 66). Federal government agencies embraced standard setting as a

central approach to improving the educational enterprise. For example, the National Assessment of Educational Progress (NAEP) aligned its mathematics assessment to the NCTM standards. Both the Goals 2000: Educate America Act and the new Title I legislation require that each state establish standards for student achievement and center educational reform efforts around achieving them (Gandal, 1995).

Publishers and testing companies have tailored their products to parallel the standards set by professional education groups and Goals 2000. Praxis III, a component of a teacher assessment system developed by Educational Testing Service, is a high-stakes assessment used to determine whether provisionally licensed teachers should receive a continuing license. According to Danielson and Dwyer (1995), "A critical element [in the development of Praxis III] was the establishment of teaching standards. The resulting 19 criteria in 4 domains represent interrelated aspects of a complex performance" (p. 66).

To reform the educational system more broadly, other standards are being identified. "Systemic reform" coordinates content, student performance, school delivery, and system delivery standards (Smith, Fuhrman, & O'Day, 1994). Content standards identify the knowledge and skills that students must master; student performance standards identify the degree of competency that must be demonstrated for each content standard; and school delivery standards identify criteria indicating whether a school provides students with the "opportunity to learn" the material identified in the content standards. Examples of school delivery standards might include: quality instructional materials needed to teach the content standards; alignment of the school curriculum with the standards; and training staff to teach them (Smith et al., 1994). System delivery standards address the quality of the district, state, or federal systems' capability to educate all students as specified in the content standards. The identification and implementation of content, performance, and school and system delivery standards presumably result in systemic educational reform and improvement of student learning.

School and system delivery standards are operationalized in terms of teacher behaviors, classroom practices, and schoolwide policies. It is therefore essential to measure the degree to which a school, local education association, or state education association has implemented a particular practice or policy. Setting school delivery standards, in particular, challenges researchers to identify practices and policies that are linked to improved student learning and that can be reliably and validly assessed.

Upgrading the Nation's Teaching Corps

During the 1980s state legislatures passed laws that imposed higher standards on teacher preparation and licensing. Evidence had accrued that prospective teachers typically enrolled in college classes that were less rigorous than those taken by students in noneducation degree programs. The Holmes Group Executive Board (1985) and the Carnegie Task Force on Teaching as a Profession (1986) called for upgrading weak teacher education programs. They recommended that teachers engage in a 5-year, rather than 4-year, course of study and set more rigorous course requirements.

Paralleling these efforts, merit pay, career ladder programs, and systematic observation of inservice teachers were also employed. These approaches may have been of limited utility because they often were not linked to improved student learning. For this reason, teacher evaluation systems and efforts at professional development more often include evidence of student learning as one of several criteria of teacher effectiveness (Sanders & Horn, 1993; Schalock, Schalock, Myton, & Girod, 1993).

Surveys conducted by Impara and colleagues (Impara, Plake, & Fager, 1993; Impara, Plake, & Merwin, 1994) have been used by professional educational organizations to identify teacher and administrator competencies, knowledge, and attitudes in assessment-related tasks. In one survey, approximately 1,700 school administrators (superintendents, elementary and secondary school principals) were asked to rate the frequency with which they performed 24 assessment tasks and the importance of these tasks. They also were asked to rate their knowledge and need of 13 assessment-related practices. A second survey of approximately 300 administrators and 555 teachers focused on knowledge of

classroom assessment. Teachers and school administrators received 35 items based on the *Standards for Teacher Competence in Educational Assessment of Students* (American Federation of Teachers, 1990). Survey respondents also were asked about their use of tests and their training in assessment. Both of these surveys were conducted to assist professional education organizations in formulating standards for educator competency in assessing students.

Colleges of education, school districts, and state departments of education would benefit from empirical information linking pedagogy to improved student performance. Survey data as well as results of empirical studies could be used to develop courses of study for education majors, design professional development programs for preservice and inservice teachers, and aid in standard-setting efforts.

Improving Student Educational Performance

Raising academic standards alone may not result in increased student achievement. McDill, Natriello, and Pallas (1987) warn that high academic standards may seem unattainable to students at risk of school failure. Raising standards could result in some of these students academically disengaging and, eventually, dropping out of school. Meeting academic standards requires the implementation of a variety of instructional and schoolwide practices.

Although recent developments in Congress suggest that support for standard-setting efforts is waning ("National History Standards," Feb. 1, 1995), efforts to raise low levels of student performance continue to receive backing from educators and the public alike. Given the limited resources of many school systems, identifying the most powerful influences on learning clearly is desirable. Models of educational performance and school learning aspire to identify most, if not all, of the important influences on students' learning and participation in school. Meta-analyses and research syntheses conducted over the past 15 years also provide a foundation that can guide the identification of effective educational practices and policies.

PREVIOUS RESEARCH SYNTHESES

One basis for research-based reform is research synthesis. Walberg (1986) argues that research synthesis has ". . . brought a new level of scientific maturity to research on teaching" (p. 214). Quantitative syntheses have features that make their results more valid and accessible to consumers of research results. Walberg (1986) describes the advantageous features of research synthesis as follows:

> [It] explicitly applies scientific techniques and standards to the evaluation and summary of research, it not only statistically summarizes effects across studies but also provides detailed descriptions of replicable searches of literature, selection of studies, metrics of study effects, statistical procedures, and both overall and exceptional results with respect to experimental conditions, context, or subjects. (p. 214)

Increasingly, conclusions from quantitative syntheses that focus on education converge on a set of practices and policies that enhance educational outcomes. Lipsey and Wilson (1993) assert that the magnitude and direction of the effects reported in these syntheses, although small, are mostly positive and have genuine practical significance. They further conclude that the results of such quantitative syntheses are ". . . more credible than those of conventional reviews" (p. 1).

Multiple Influences on Learning

Historically, research syntheses have focused either on a specific instructional practice or on several diverse practices in order to compare their relative effectiveness. The following syntheses fall into the latter category.

Walberg, Schiller, and Haertel (1979) published one of the first quantitative syntheses of research on teaching. The authors collected reviews published between 1969 and 1979 on the impact or association of instructional variables on students' cognition, affect, and behavior. Among the instructional practices synthesized were: time on task, mastery learning, psychological incentives, open versus traditional classroom practices, and use of advance organizers. Nearly two thirds of the effect sizes or correlations were positive, indicating that many well-established educational practices enhance student achievement.

In a systematic examination of 19 reviews of teaching process-student outcome research, Waxman and Walberg (1982) found consistent and substantial agreement that cognitive engagement, motivational incentives, pupil involvement in learning, reinforcement, and management and classroom climate are positively associated with student learning outcomes.

During the 1980s, Walberg and colleagues conducted syntheses of the influence of instruction, psychological environments, and student aptitudes on educational achievement. The syntheses focused on nine theoretical constructs hypothesized to be consistently related to educational learning: student age or developmental level; ability (including prior achievement); motivation; amount of instruction; quality of instruction; exposure to the mass media; and the psychological environments of the class, home, and peer group outside school. The results provided systematic evidence that the constructs are consistently correlated with learning (Walberg, 1984).

Fraser and colleagues (1987) compiled an extensive review of research on factors related to school learning. They summarized results of over 2,000 bivariate studies that identified nine aptitudinal, instructional, and environmental factors that consistently exhibited strong influences on academic learning. Fraser et al. (1987) also synthesized 135 meta-analyses with school achievement as an outcome, as well as 92 meta-analyses of attitude outcomes; the studies spanned 50 years of research in the United States and elsewhere. Among the influences examined were contextual factors, including student and teacher characteristics, curriculum materials, facilities and equipment, home environment, and school climate.

Wang et al. (1990) reported a content analysis of research literature on school learning. Search and selection procedures yielded 179 handbook and annual review chapters, commissioned papers, and other authoritative reviews. Results confirmed the primacy of student characteristics, instruction, and home and community influences on academic learning. More distal variables, such as state and district policy, proved less influential. More recently, Wang et al. (1993) synthesized ratings of 61 research experts, 91 meta-analyses, and 179 handbook chapters and narrative reviews, compiling approximately

11,000 statistical relationships. Content analyses, expert ratings, and results from meta-analyses revealed moderate to substantial agreement on the importance of the psychological, instructional, and home environment variables.

Results of these syntheses support the primacy of student characteristics, quality and quantity of instruction, and home and community influences on student learning. The dramatic pattern of overall positive results reported is characteristic of quantitative syntheses and meta-analytic reviews (Lipsey & Wilson, 1993). This pattern of results cannot be "explained as artifacts of meta-analytic techniques or generalized placebo effects" (Lipsey & Wilson, 1993, p. 1).

Specific Practices that Improve Learning

Since the mid-1970s many quantitative research syntheses have been conducted on specific instructional practices. Among these are syntheses of computer aided/based instruction (Kulik & Kulik, 1987; Ryan, 1991); programmed or individualized instruction (Bangert, Kulik, & Kulik, 1983); cooperative task structures (Johnson, Johnson, & Maruyama, 1983; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981); student tutoring (Cohen, Kulik, & Kulik, 1982; Cook, Scruggs, Mastropieri, & Casto, 1986); behavioral objectives, reinforcement, cues, and feedback (Lysakowski & Walberg, 1982); mastery learning (Guskey & Pigott, 1988); home environment (Graue, Weinstein, & Walberg, 1983); technology-based instructional strategies (Shwalb, 1987; Williams, 1990); reading instruction strategies (Pflaum, Walberg, Karegianes, & Rasher, 1980); whole-language approach (Stahl & Miller, 1989); vocabulary instruction (Klesius & Searls, 1990; Stahl & Fairbanks, 1986); and bilingual instruction (Willig, 1985).

Summarizing across meta-analyses, a number of specific practices have consistently improved academic learning are degree of curriculum articulation and organization; abundant classroom materials that support the instructional program; maximized learning time; high student expectations; opportunities for students to give extended oral and written responses; degree of classroom engagement; student

participation in setting goals and making instructional decisions; opportunities for students to receive intensive instruction in one-on-one or tutoring arrangements; engaging in cooperative learning; frequent assessment; and a home environment that supports learning (Fraser et al., 1987; Lipsey & Wilson, 1993; Slavin, Karweit, & Madden, 1989; Wang et al., 1993).

The results of these syntheses provide evidence that many well-designed instructional practices have an effect on student learning. Although these syntheses did not consider the relative impact of several instructional practices simultaneously, they often did examine differences in the learners' contexts. It is beyond the scope of this paper to report the effects of the many educational treatments and practices that have been studied using meta-analytic and synthetic methods. These results, however, served as the research basis for the extensive survey reported in this paper, as explained in a subsequent section.

METHOD

The purpose of the survey was to gather expert judgments from educational researchers and practitioners concerning the influence and assessability of a variety of educational practices and policies. The survey was designed to generate practical findings that could be used by educators in designing effective classroom, school, and district practices. In the winter of 1993, the mail survey was sent to approximately 3,100 school administrators, policymakers, and educational researchers. Survey recipients were asked to rate the degree of influence on learning and assessability of the 146 educational practices and policies. A five-step process was used to develop the survey: a theoretical framework of student learning was identified; items were selected and revised; two rating scales were constructed; items were classified into four categories; and three forms were compiled.

Theoretical Framework

Based on the results of prior quantitative syntheses (discussed above), a theoretical framework comprised of 228 influences on student learning and organized within six theoretical constructs (State and District Governance and Organization; Home and Community Educational Contexts; School

Demographics, Culture, Climate, Policies, and Practices; Design and Delivery of Curriculum and Instruction; Classroom Practices; and Student Characteristics) was adopted for purposes of this research (see Wang et al. [1993] for a detailed description of the framework and theoretical constructs).

Item Selection and Revision

The 228 influences were used by Reynolds, Wang, and Walberg (1992) in a prior survey of regular classroom versus special education teachers, researchers, and school administrators. From the original pool of 228 items, a total of 146 items, those that focused on classroom and school practices and district, state, and federal policies, were selected for inclusion in the current survey. Some items were rewritten to improve their clarity and to tailor them to the purposes of this study.

Construction of Rating Scales

Two three-point rating scales were constructed: degree of influence on learning, and assessability. Learning Influence was defined as providing students with opportunities to acquire important knowledge, skills, and attitudes. The rating scale was as follows:

1 = Little or no influence on learning
2 = Moderate influence on learning
3 = Strong influence on learning

Assessability was defined as the extent to which the presence or absence of the policy or practice can be ascertained by objective observations, archived documents, or other means. The following rating scale was utilized:

1 = Not assessable
2 = Fairly assessable
3 = Very assessable

Classifying Items into Four Categories

Three independent judges classified the 146 items into four categories: Classroom Practices and Policies (70 items); Schoolwide Practices and Polices (39 items); Curriculum Design and Delivery (16

items); and Federal, State, and District Policies (21 items). The items classified into each category are shown in Tables 2, 3, 4, and 5.

Procedure

Survey directions requested that respondents rate each item in terms of its influence on student learning and assessability. The 146 items on the survey were randomly divided into three forms, so that each recipient received no more than 50 items, drawn from all four of the item categories. Because the survey was to be administered to groups of researchers and practitioners, different background items were prepared for the two groups. Researchers were asked to identify their primary research interest (e.g., school administration, and curriculum studies) and their gender; practitioners were asked to identify their current position (e.g., principal, superintendent), the type of school administered (e.g., elementary, middle school), the location of schools or districts (e.g., all districts statewide, suburban), and their gender. Mail surveys were sent to all recipients in November 1993; nonrespondents were sent a follow-up survey in January 1994.

Sample

Eight samples were drawn from the following six organizations: American Association of School Administrators (AASA); American Educational Research Association (AERA) Divisions A (Administration), C (Learning and Instruction), and H (Evaluation); Council of Chief State School Officers (CCSSO); Council of the Great City Schools (CGCS); National Association of Elementary School Principals (NAESP); and National Association of Secondary School Principals (NASSP). Membership lists were supplied by each organization. In two of the organizations (CCSSO and CGCS) every member was sampled because of the small universes. In the other four organizations (AASA, NAESP, NASSP, and AERA) random samples without replacement were drawn.

Table 1 presents the number of recipients and percent return for each professional group and for the total sample. Returns are presented from the original mailing of the survey and the follow-up

mailing. For each of the three forms of the survey, chi squares were calculated to test differences among return rates by original and follow-up mailings for: males and females; membership in professional group for researchers (AERA Divisions A, C, and H); and membership in professional groups for practitioners (AASA, NAESP, NASSP, CCSSO, and CGCS). Of the 12 chi squares calculated only one was significant, male versus female researchers on Form 1 of the survey ($x^2=6.48$, $df=1$, $p<.01$). These results suggest that the 42% of the sample that did not reply may not differ much from the 58% that did, allowing for change in address and other reasons. Because there was only an isolated significant difference, and in light of the moderately high return rate for the survey, the results from the original and follow-up mailing were combined.

Insert Table 1 about here

RESULTS

Tables 2 through 5 show the overall mean ratings of influence and assessability. To identify relatively high-influence and high-assessability items, two somewhat arbitrary cutoff points were chosen. Items are designated with an "I" if their influence mean is above 2.33 (overall influence mean of all items) and an "A" if their assessability mean is above 2.19 (overall assessability mean). Practices and policies) with the greatest feasibility are those that have high influence and high assessability. Those rated as having high influence but low assessability require attention from the research community because, although they are currently difficult to measure, they are linked to student learning. Practices judged to be of low influence are not discussed in detail because they are of little value to reform efforts.

Findings within Item Categories

Classroom Practices. Table 2 shows the 70 Classroom Practice items ranked by the total sample according to degree of influence on learning. Items with the highest influence ratings were those that

focused on teacher as the agent of action; a rich, cognitively challenging classroom environment; and teacher-student interactions about the learning task. Of the items with the lowest influence ratings, few focused on the cognitive environment of the classroom; most centered on specific methods of instruction, such as diagnostic-prescriptive techniques, academic tracking, cross-age tutoring, and instructional teaming. Other low-influence items focused on classroom climate variables, such as democracy (involving all students in classroom activities) and formality (expecting students to follow explicitly stated rules).

Insert Table 2 about here

The items rated most assessable by survey recipients represent tangible features of the classroom (particular instructional practices, resources, and grouping practices), such as size of instructional groups, well-organized lessons, frequent feedback, use of goal direction, computer-assisted instruction, frequent measurement of basic skills, and student collaboration. Explicit teachers' behaviors were rated as more assessable than items focusing on teacher style. Assessable items captured observable teacher actions and did not require judgments of teacher "encouragement," "enthusiasm," or other "style" variables.

Seventeen of the 70 items (marked I and A in Table 2) were identified as having high influence on learning as well as high assessability. These items are most feasible for immediate use in classrooms and schools; they focus on the central role of the teacher, observable teacher behaviors, and the academic focus (i.e., providing corrective feedback, well-organized classrooms where students are appropriately challenged, and high expectations of content mastery). These items represent features of educational settings with which school administrators and practitioners are most familiar.

Twenty-five of the 70 items were rated as having high influence but low assessability. These focused on less observable teacher actions, such as: promotion of metacognitive strategies; use of

cognitively challenging questions; use of rehearsal and elaboration of new concepts; and use of instruction to recognize and dispel student misconceptions. In contrast to the items rated as high influence and high assessability, these items require knowledge of cognitive principles of instruction as well as complex, inductive reasoning about teachers' actions. They are high-inference items. Judging whether a question is cognitively challenging, for example, is more difficult than recognizing that a teacher is providing feedback. When the teacher's actions represent familiar educational pursuits, such as conducting a well-organized lesson, giving feedback, or conducting assessments, the practices are judged as both influential and assessable. However, when they are cognitively based practices--such as correcting misconceptions, promoting metacognitive strategies, or asking questions that are cognitively challenging--the influence ratings are high, but assessability ratings are low. These cognitively based practices are examples of the constructivist principles of learning and teaching, and the technology of assessing such teaching has not been well established.

Curriculum Design and Delivery. Table 3 presents the 16 Curriculum Design and Delivery items ranked according to degree of influence on learning. Of the 16 items, 9 were identified as having a moderate or greater influence on learning. They focused on: alignment of curriculum content, instruction, and assessment; tailoring the content to students' cognitive capabilities and prior knowledge; and availability of materials, instructional activities, assessments, and equipment. The seven items rated as having less influence on learning were characterized by: the role of student interests and cultural diversity; availability of classroom aides and efficient use of classroom space; teacher encouragement of self-regulated learning strategies; use of written records to monitor student progress; and curriculum units structured around key discipline-based concepts. Curriculum-related practices were perceived as influential when they are sensitive to students' cognitive needs, but less influential when they adapt to student interests, preferences, and cultural backgrounds. The physical environment of the classroom was perceived as less influential on learning. Further, matching curriculum content to a child's cognitive

capabilities was perceived as more influential than promoting self-regulated learning or metacognitive strategies.

Insert Table 3 about here

The 11 items judged as relatively assessable focused on tangible features of the instructional environment, such as: use of objectives; inclusion of assessments; explicit classroom rules and procedures; alignment among goals, instruction, and evaluation; the difficulty level of the materials; availability of materials and activities for instructional groups of different sizes; and availability of classroom aides. Those items judged as less assessable focused on students' past experiences, interests, and cultural backgrounds; well-configured classroom space; and teacher development of self-regulated learning strategies.

Eight of the 16 items were rated both influential and assessable. These items generally reflected the availability of materials, assessments, and equipment as well as the features of the materials, especially their cognitive difficulty.

Only one item was rated as influential and not assessable: use of materials that reflect student experiences. Making a judgment about, for instance, whether an art unit on the Renaissance matches the academic and social experiences of a classroom of students is complex and subjective. The complexity of the judgment is heightened by having to assess the suitability for a classroom of students rather than for a single student.

Schoolwide Practices and Policies. Of the 39 items in this category (see Table 4), 21 were identified as having a moderate or greater influence on learning. The focus of these more influential items was: a safe, orderly, and positive school climate; site-based management practices; parent involvement programs; guarding of student instructional time; shared curriculum decision-making among

staff and administrators; features of effective schools programs, especially an academic school climate; low staff turnover and alienation; and small school size. The practices and policies identified as influential coincide with many of the beliefs fostered by the effective schools movement about what improves student performance.

Insert Table 4 about here

The 18 items rated as having less influence were: policies to influence students' out-of-school behaviors; schoolwide activities to influence student self-esteem, attitudes, and social conduct (i.e., discouraging delinquent and criminal behavior, encouraging friendships over clique formation, increasing student occupational aspirations, promoting motivation toward lifelong learning). In addition, policies on schoolwide attendance, grading, academic progress, and suspension and expulsion were rated as less influential.

Sixteen of the 39 items were rated as moderately or highly assessable. Assessable items were those that were easy to judge as present or absent--a safe, orderly school climate; school district decentralization; small school size; and low staff absenteeism. The remaining 23 items, judged less assessable, were those that would require evidence of consensus, positive attitudes, student use of out-of-school time, and other practices and policies that are less observable (e.g., schoolwide activities to promote positive, nondisruptive behaviors; a positive attitude toward school, teacher, and subject matter; and self-esteem and self-confidence).

Twelve of the 39 items were rated both influential and assessable. These items involve explicit policies and practices that could readily be discerned and in some cases quantified (e.g., small school size; low staff absenteeism; presence of schoolwide policies for parent involvement, recognition of

academic achievement, or discipline). Most of these items represent popular approaches to improving school effectiveness.

Nine of the 39 items were rated as highly influential but low in assessability. Most of these items focused on policies that influence school climate. They require inferences about attitude toward school, teachers, and subject matter; perseverance on learning tasks; and aspirations.

Federal, State, and District Policies. Of the 21 items in this category (see Table 5), only 4 were rated as having a moderate or greater influence on learning. These items were: central office support; board of education support; academic course and unit requirements; and higher per-pupil expenditures. The remaining 17 items, rated as less influential, were characterized by: levels of categorical funding; assessment requirements; provision of student social services; length of school day and year; teacher licensure requirements; contractual limits on class size, classroom aides' activities, and teachers' after-school meetings; efficient transportation system; school district size; and school district decentralization. The more influential policies are those that impinge most directly on students' lives--academic requirements and funds for instruction.

Insert Table 5 about here

Only 2 of the 21 items were rated difficult to assess--limited school district bureaucratization, and central office assistance and support. Central office assistance and support would have been classified as assessable if the mean rating had been .01 higher. Nearly all of the policy items were judged at least moderately assessable because the presence or absence of a stated federal, state, or district policy can be readily detected.

The three items that were both highly influential and highly assessable were: board of education support; academic course and unit requirements; and higher per-pupil expenditure. All three of these items represent policies set at the district and state level.

Central office assistance and support for school programs, as well as limited school district bureaucratization, were the only items judged as influential but not assessable. Limited school district bureaucratization is difficult to quantify, and hence to measure.

Mean Influence and Assessability by Item Category

Table 6 shows the mean influence and assessability ratings for each item category as well as a grand mean for influence on learning and assessability. Based on the grand mean for influence, those categories judged more influential were Classroom Practices and Schoolwide Practices and Policies. Considered less influential were Curriculum Design and Delivery and Federal, State, and District Policies.

Insert Table 6 about here

Those categories that deal with matters proximal to students are judged more influential; those that deal with matters distal to students are judged less so. Interestingly, although Federal, State, and District Policies were considered least influential, they were considered the most assessable category. Curriculum Design and Delivery, Classroom Practices, and Schoolwide Practices and Policies were considered to be less assessable. Indeed, the presence or absence of particular federal, state, or district policies is readily quantified, whereas assessment of classroom practices, schoolwide practices and policies, and design and delivery of curriculum involve making higher-level inferences and are more challenging to assess.

Relation of Influence and Assessability for Groups

The product-moment correlation between influence and assessability for the entire sample was .20. This provides little evidence of congruence between influence on learning and assessability.

Item means were calculated for the combined researcher group (AERA Divisions A, C, and H) and the practitioner group (AASA, CCSSO, CGCS, NAESP, and NASSP). Table 7 shows very high agreement between the researchers and practitioners in the ratings of influence and assessability. Researchers, however, found no congruence between influence on learning and assessability, whereas practitioners found moderate congruence.

Insert Table 7 about here

Differences among Groups

Table 8 presents the results of 10 one-way analyses of variances (ANOVA). The independent variable was the eight professional groups (AERA-Division A; AERA-Division C; AERA-Division H; AASA; CCSSO; CGCS; NAESP; and NASSP). The dependent variables were the influence and assessability mean ratings for each of the item categories, a total mean influence rating, and a total assessability rating. The five analyses of variance for influence (the four item categories and the total) were significant ($p < .0001$). For each of the five analyses of variance for influence, the three researcher groups (AERA Divisions A, C, and H) rated the items as less influential than did the five practitioner groups (AASA, CCSSO, CGCS, NAESP and NASSP).

Insert Table 8 about here

Three of the five ANOVAs for assessability were significant ($p < .0001$): Classroom Practices; Schoolwide Practices and Policies; and Federal, State, and District Policies. The researcher groups rated the Federal, State, and District Policies items as more assessable than did the practitioner groups. In general, elementary and secondary school principals rated the Classroom Practices item category as well as the Schoolwide Practices and Policies item category as more assessable than did the other groups of practitioners and researchers. Total assessability also was significant ($p < .005$); again, elementary and secondary school principals rated the items as more assessable than did the other groups.

The large sample sizes in each professional group made small differences between the eight professional groups mean ratings on item categories statistically significant. Thus, the significant differences reported among the groups must be interpreted somewhat cautiously.

The differences among professional groups are illustrated in Figures 1 and 2. As seen in Figure 1, researchers rated the four item categories as less influential than the practitioner groups. Both researchers and practitioners rated the Federal, State, and District Policies as the least influential item category.

Insert Figure 1 about here

In Figure 2, researchers and most practitioner groups rated the assessability of Federal, State, and District Policies more highly than the other categories. Curriculum Design and Delivery items were generally rated as more assessable than the Classroom Practices and Schoolwide Practices and Policies item categories. Professional groups whose memberships are composed of school principals (NAESP and NASSP) tended to rate classroom, curriculum, and schoolwide practices as more assessable than did groups composed of district administrators (AASA) and state school officers (CCSSO).

Insert Figure 2 about here

APPLYING THE SURVEY DATABASE

From the survey data, a framework emerged that can guide reform efforts. Based on each survey item's influence and assessability ratings, we identified items that illustrate how survey results can be used to: guide the development of site-specific programs; monitor program implementation; evaluate program outcomes; and guide teacher education and professional development.

Site-Specific Program and Assessment Development

Site-specific program development can be based on the classroom practices, features of curriculum design and delivery, and schoolwide practices enumerated in the survey items. By reviewing the survey items that were rated as exerting a high degree of influence on student learning, local practitioners can identify the practices and policies that meet their particular needs and are likely to increase student learning. For example, a school district that wants to introduce student collaborative grouping as an alternative to whole-class instruction would consult the Classroom Practices item category and find three practices relevant to their interest: use of small instructional groups; cooperative learning groups; and peer tutoring. These three practices were also rated as highly assessable. Based on research evidence and expert judgments, these classroom practices can be recommended as worthwhile investments likely to enhance student learning.

Several Curriculum Design and Delivery items can inform the use of collaborative student groups. For example, one item focuses on the importance of having a variety of curriculum materials available for use with instructional groups of different sizes. Two additional items focus on tailoring classroom materials to students' developmental and ability levels. These items were rated as influential and assessable, as were the Classroom Practice items. Thus, both classroom practice and the design of

curriculum materials can be informed by the application of survey results to a specific site. Further program development could be based on items from the Schoolwide Practices and Policies category and the Federal, State, and District Policies categories.

The example above demonstrates how a local education agency might use the survey database to select effective classroom practices (collaborative student groups) and design the curriculum materials tailored to the specific children and context being served. In addition to contributing to program development, the survey results can guide assessment development at local sites. Many survey items were rated as high influence but low assessability (see Tables 2 through 5). Local practitioners may wish to develop assessments for items that are high influence and low assessability. For example, several items in the Classroom Practice category focus on instruction based on cognitive principles (e.g., teacher use of scaffolding, teacher use of rehearsal and elaboration of new concepts, teacher use of instruction to recognize and dispel student misconceptions). All these items were rated as high on influence and low on assessability. If a district or school chooses to develop a constructivist program based on cognitive principles of learning and instruction, it may be necessary for the local site to develop new assessments. The survey results can identify which practices and policies have readily available measurements and which would require the construction of new measures.

Monitoring Program Implementation and Evaluation of Outcomes

Some survey items can be used to monitor program implementation and outcome-based evaluations. Below are selected items that could be used to monitor a program implementation. These items represent general implementation processes that apply to most programs.

Classroom Practices.

Well-organized and well-planned class activities

Presence of a variety of instructional activities and content

Clearly presented academic, social, and attitudinal program goals

Curriculum Development and Delivery.

Alignment among goals, content, instruction, assignments, and evaluation

Availability of materials and activities for use with whole classrooms, small groups, or one-on-one instruction

Well-equipped classroom

Teacher use of efficient and well-communicated routines, rules, and procedures

Schoolwide Practices and Processes.

Safe and orderly school climate

Low staff absenteeism

Federal, State, and District Policies.

Board of education support for school programs

The items specified above can be used to monitor the implementation of a variety of programs. These generally would have to be supplemented by survey items focused on particular features of the program being implemented. For example, the implementation of a program to establish an academically challenging classroom and school environment might be monitored using survey items, such as:

Teachers provide frequent, corrective feedback

Use of materials tailored to students' different abilities and developmental levels

Use of materials that include assessments and diagnostic tests

Schoolwide promotion of increased student time on task

Schoolwide emphasis on and recognition of academic achievement

Survey items can also be rewritten as evaluation outcomes and used, along with other criteria, to judge program success or failure. For example, the Classroom Practices item "use of goal direction (specific and explicit objectives of learning activities" can be rewritten as the following evaluation outcome: "Teachers use lesson objectives to promote students' sense of direction and purpose in their instructional activities." This outcome can be operationalized through the use of indicators such as "95%

of classroom lessons observed will include an explicit presentation of learning objectives"; "a review of teachers' written instructional plans reveal objectives for each lesson"; and "65% of students in a given classroom will report understanding the purpose of their instructional activity." Thus, survey items are a catalog of practices and policies that can be rewritten as outcomes and indicators for use in summative evaluations.

Teacher Education and Professional Development

Survey results also can be used by teacher educators to plan a course of study for preservice teachers. This survey identifies pedagogical practices that are linked to student learning. Based on the survey results teacher educators can determine which of the practices, rated as influential, should be part of a course of study for education majors. Likewise, professional development courses for inservice teachers can be designed around constellations of influential practices and policies. In keeping with recent changes in designing professional development experiences, staff development should not be fragmented or piecemeal. Staff development efforts should be based on a strategic plan for change (Fullan, 1991; Sarason, 1990; Sparks, 1995). The survey results combine research-based information and expert judgments on 146 practices and policies at the classroom, curricular, school and district, state, and federal levels. These results provide a coherent knowledge base that can guide a school district or a school's professional development efforts. As results-driven education and systemic reform continue to exert influence on educational change, the database reported in this paper can provide credible guidance for professional development.

Below is a list of topics that could be used by teacher educators and staff developers to enhance preservice and inservice teachers' knowledge and skills. The topics listed below are organized by item categories. Each topic was identified using one or more survey items that were rated as both influential and assessable.

Classroom Practices Item Category.

Setting high academic expectations for all students

Developing a well-organized classroom

Use of student collaborative groups to promote learning

Providing effective written and oral feedback

Curriculum Design and Delivery Item Category.

Adapting curricula, instructional activities, and materials to students' cognitive levels and prior knowledge

Aligning goals, curriculum content, instructional events, and assessments

Creating classrooms with a variety of materials and equipment that meet the needs of diverse student populations

Development and communication of classroom routines, rules, and procedures

Schoolwide Practices and Policies Item Category.

Guarding student instructional time

Establishing an effective parent involvement program

Creating a school climate that is safe, orderly, positive, and academically rigorous

Shared decision making among school staff, administrators, and parents

Federal, State, and District Policies Item Category.

Informing teachers about district and state policies

Defining the role of boards of education in revitalizing school programs

Allocating funds for cost-effective instruction

CONCLUSIONS

Based on the results of this survey, there is a shared view held by the educational research and practitioner communities about which practices and policies are most likely to influence student learning. The finding of a correlation of .87 between researchers' and practitioners' judgments of influential

practices and policies suggests that educational research findings are widely disseminated and have influenced educational practitioners' beliefs about effective praxis.

Although there is high agreement about which practices and policies influence student learning, there is less consensus about their assessability. The order of the item categories when ranked from most to least influential is: classroom practices, schoolwide practices and policies, curriculum design and delivery, and finally, federal, state, and district policies. Ranked from most to least assessable, the item categories are: federal, state, and district policies, design and delivery of curriculum, classroom practices, and schoolwide practices and policies. Federal, state, and district policies were the least influential of the item categories, but the most assessable.

The assessability of the practices and policies is a criterion that must be considered as schools, districts, and states develop and implement strategies to improve student and teacher performance. Assessability, however, cannot be the sole criterion when strategies to improve academic performance are being designed. In those cases where an influential practice or policy is judged to have low assessability, resources need to be allocated to develop a valid and reliable assessment. Low assessability of a practice or policy only reduces the rapidity with which the practice or policy can be implemented, it should not eliminate the practice or policy from use. Local assessment development combined with local program development ensures that site-specific reform efforts can be tailored to the needs of particular communities.

During the past 15 years, three waves of educational reform have altered educational practice and policy at the national, state, and local levels (Murphy, 1990). We have moved beyond the first and second waves of reform, which focused on changing the centralized educational system and empowering parents and teachers through shared decision making and collaboration. The third, an ongoing wave of reform, is focused on increasing student learning. The success of this effort can be facilitated through the application of effective practices and policies that enhance student learning and teacher performance.

The survey results presented in this paper provide new knowledge that is directly relevant to the current wave of reform.

The combination of research-based survey items and expert judgments reported in this survey provides one basis for systemic educational reform. Each survey item was based on a correlation or effect size between a particular practice or policy and student achievement. Thus, each item has criterion-related validity. The influence and assessability ratings for each item provide expert judgments from the practitioner and research communities. The survey results can guide site-specific efforts to reform classroom, school, district, and state practice and policy. Item influence and assessability ratings can inform local program development and identify the need for assessment development. Items can be selected to monitor program implementation. Items can also be revised to serve as outcomes in summative evaluations. In each case, the features of local education context determine which survey items are most useful to their reform efforts. Local practitioners must judge which of the practices and policies are viable given the economic, philosophical, political, and cultural climate of their communities.

Changing the educational system at the state, district, and school levels is complex. Teachers and school administrators must implement changes at the level of curriculum, classroom instruction, school organization, and governance in a manner that aligns school, district, and state goals (Schwartz, 1993). Strategies must be developed that guarantee all students will have an opportunity to master an academically rigorous curriculum. Effective instructional methods and sensitive, fair assessments must be identified or developed. Professional development must be designed and delivered to ensure that preservice and inservice teachers have the content and pedagogical knowledge and skills required for such changes. All these components of change--alignment of goals, new curricula, instructional strategies, assessments, methods of school governance, and professional development--must then be implemented and evaluated to judge the success of the reform efforts. Multidimensional reform efforts must be tailored by local education agencies to meet the needs and characteristics of their students, faculties, and

communities. In order for schools, districts, and states to construct such reform efforts, they must have access to new knowledge about effective practice and policy. Practitioners cannot upscale their local programs unless there is information available about the established success of educational practices and policies. Results of this survey are a rich source of such information.

References

American Federation of Teachers, National Council of Measurement in Education, National Education Association. (1990). Standards for teacher competence in educational assessment of students. Washington, DC: National Council on Measurement in Education.

Bangert, R. L., Kulik, J. A., & Kulik, C. C. (1983). Individualized systems of instruction in secondary schools. Review of Educational Research, 53, 143-158.

Carnegie Task Force on Teaching as a Profession. (1986). A nation prepared: Teachers for the 21st century. New York: Carnegie Forum on Education and the Economy.

Cohen, P. A., Kulik, J. A., & Kulik, C. C. (1982). Educational outcomes of tutoring: A meta-analysis of findings. American Educational Research Journal, 19, 237-248.

Cook, S. B., Scruggs, T. E., Mastropieri, M. A., & Casto, G. C. (1986). Handicapped students as tutors. Journal of Special Education, 19, 483-492.

Danielson, C., & Dwyer, C. (1995). How Praxis III supports beginning teachers. Educational Leadership, 52(6), 66-67.

Fraser, B. J., Walberg, H .J., Welch, W. W., and Hattie, J. A. (1987). Syntheses of educational productivity research. International Journal of Educational Research, 11, 145-252.

Fuhrman, S. H., & Elmore, R. F. (1994). Governors and education policy in the 1990s. In R. F. Elmore and S. H. Fuhrman (Eds.), The Governance of Curriculum. 1994 Yearbook of the Association for Supervision and Curriculum Development (pp. 56-74). Alexandria, VA: Association for Supervision and Curriculum Development.

Fullan, M. (1991). The new meaning of educational change. New York: Teachers College Press.

Gandal, M. (1995). Not all standards are created equal. Educational Leadership, 52(6), 16-21.

Graue, M. E., Weinstein, T., & Walberg, H. J. (1983). School-based home instruction and learning: A quantitative synthesis. Journal of Educational Research, 76, 351-360.

Guskey, T. R., & Pigott, T. D. (1988). Research on group-based mastery learning programs: A meta-analysis. Journal of Educational Research, 81, 197-216.

Holmes Group Executive Board. (1985). Tomorrow's teachers: A report of the Holmes Group. East Lansing, MI: Author.

Impara, J. C., Plake, B. S., & Fager, J. J. (1993). Educational administrators' and teachers' knowledge of classroom assessment. Journal of School Leadership, (3), 510-521.

Impara, J. C., Plake, B. S., & Merwin, J. C. (1994). Student assessment tasks and knowledge: Comparing superintendents and elementary and secondary principals. Journal of School Leadership, (4), 517-528.

Johnson, D. W., Johnson, R. T., & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and a meta-analysis of the research. Review of Educational Research, 53, 5-54.

Johnson, D. W., Maruyama, G., Johnson, R., Nelson, D., & Skon, L. (1981). Effects of cooperative, competitive, and individualistic goal structures on achievement. A meta-analysis. Psychological Bulletin, 89, 47-62.

Klesius, J. P., & Searls, E. F. (1990). A meta-analysis of recent research in meaning vocabulary instruction. Journal of Research and Development in Education, 23, 226-235.

Kulik, J. A., & Kulik, C-L. C. (1987). Review of recent research literature on computer-based instruction. Contemporary Educational Psychology, 12, 222-230.

Lipsey, M. W. & Wilson, D. B. (1993). The efficacy of psychological, educational, and behavioral treatment: Confirmation from meta-analysis. American Psychologist, 48(12), 1181-1209.

Lysakowski, R. S., & Walberg, H. J. (1982). Instructional effects of cues, participation, and corrective feedback. A quantitative synthesis. American Educational Research Journal, 19, 578-599.

McDill, E. L., Natriello, G., & Pallas, A. M. (1987). A population at risk: Potential consequences of tougher school standards for school dropouts. In G. Natriello (Eds.), School dropouts: Patterns and practices (pp. 106-147). New York: Teachers College Press.

Murphy, J. (1990). The educational reform movement of the 1980s: A comprehensive analysis. In J. Murphy (ed.), The educational reform movement of the 1980s: Perspectives and cases. Berkeley, CA: McCutchan Publishing Corporation.

National Commission of Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, DC: U.S. Government Printing Office.

National Council of Teachers of Mathematics. (1989). Curriculum and evaluation standards for school mathematics. Reston, VA: Author.

National History Standards Could Sink Goals 2000, Rep. Goodling Warns. (Feb. 1, 1995). Education Week, XIV(19), 18.

Pflaum, S. W., Walberg, H. J., Karegianes, M. L., & Rasher, S. P. (1980). Reading instruction: A quantitative analysis. Educational Researcher, 9(7), 12-18.

Reynolds, M. C., Wang, M. C., & Walberg, H. J. (1992). The knowledge bases for special and general education. Remedial and Special Education, 13(5), 6-10, 33.

Ryan, A. W. (1991). Meta-analysis of achievement effects of microcomputer applications in elementary schools. Educational Administration Quarterly, 27, 161-184.

Sanders, W. & Horn, S. (1993). Tennessee Value Added Assessment System. In J. R. Sanders, E. H. Assaff and S. Nyirenda (Eds.). Evaluation keys to school improvement: Applying research to improve evaluations of teachers, other professional school personnel and schools (pp. 57-62). Proceedings of the CREATE and PDK Second Annual Evaluation Institute. June, 19-24, 1993. Kalamazoo, MI.

Sarason, S. (1990). The predictable failure of educational reform. San Francisco: Jossey-Bass.

Schalock, J. D., Schalock, M. D., Myton, D., & Girod, J. (1993). Focusing on learning gains by pupils taught: A central feature of Oregon's outcome-based approach to the initial preparation and licensure of teachers. Journal of Personnel Evaluation in Education, 7(2), 135-158.

Shwalb, B. J. (1987). Instructional technology in American and Japanese schools: A meta-analysis of achievement findings. (Doctoral dissertation, University of Michigan). Dissertation Abstracts International, 48, 370A.

Schwartz, H. (1993). Putting the pieces together: A systemic approach to educational reform. Planning and Changing, 22, 3-4.

Slavin, R. E., Karweit, N. L., & Madden, N. A. (1989). Effective programs for students at risk. Needham Heights, MA: Allyn & Bacon.

Smith, M. S., Fuhrman, S. H., & O'Day, J. (1994). National curriculum standards: Are they desirable and feasible? In R. F. Elmore and S. H. Fuhrman (Eds.), The Governance of Curriculum, 1994 Yearbook of the Association for Supervision and Curriculum Development (pp. 12-29). Alexandria, VA: Association for Supervision and Curriculum Development.

Sparks, D. (1995, Winter). A paradigm shift in staff development. ERIC Review, 3(3), 2-4.

Stahl, S. A., & Fairbanks, M. M. (1986). The effects of vocabulary instruction: A model-based meta-analysis. Review of Educational Research, 56, 72-110.

Stahl, S. A., & Miller, P. D. (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. Review of Educational Research, 59(5), 87-116.

Walberg, H. J. (1984). Improving the productivity of America's schools. Educational Leadership, 41(8), 19-30.

Walberg, H. J. (1986). Syntheses of research on teaching. In M. C. Wittrock (Ed.), Handbook of Research on Teaching (3rd ed., pp. 214-229). New York: Macmillan.

Walberg, H . J., Schiller, D., & Haertel, G. D. (1979). The quiet revolution in educational research. The Kappan, 61(3), 179-182.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1990). What influences learning? A content analysis of review literature. Journal of Educational Research, 84(1), 30-43.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993). Toward a knowledge base for school learning. Review of Educational Research, 63(3), 249-294.

Waxman, H. C., & Walberg, H. J. (1982). The relation of teaching and learning. Contemporary Education Review, 2, 103-120.

Williams, W. V. L. (1990). A meta-analysis of the effects of instructional strategies delivered to the mathematically disadvantaged (Doctoral dissertation, George Peabody College for Teachers of Vanderbilt University, 1989). Dissertation Abstracts International, 51, A.

Willig, A. C. (1985). A meta-analysis of selected studies on the effectiveness of bilingual education. Review of Educational Research, 55, 269-317.

Table 1

Original and Follow-Up Survey Returns and Total Survey Recipients

	Survey Recipients	Returns (%)		
Professional Group	N	Original	Follow-Up	Total
AERA-Division A	498	235 (78.1)	66 (21.9)	301 (60.4)
AERA-Division C	500	237 (79.0)	63 (21.0)	300 (60.0)
AERA-Division H	499	245 (80.3)	60 (19.7)	305 (61.1)
AASA	546	227 (73.9)	80 (26.1)	307 (56.2)
CCSSO	57*	22 (56.4)	17 (43.6)	39 (68.4)
CGCS	43	21 (77.8)	6 (22.2)	27 (62.8)
NAESP	500	201 (67.9)	95 (32.1)	296 (59.2)
NASSP	498	178 (73.3)	65 (26.7)	243 (48.8)
Total	3141	1366 (75.1)	452 (24.9)	1818 (57.9)

*The CCSSO mailing was sent to state superintendents from the 50 states and Washington, D.C., the executive director of CCSSO, the Connecticut Commissioner of Education, and the Superintendents of American Samoa, Puerto Rico, the Virgin Islands, and Manila/Philippines.

Table 2

Classroom Practices: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
1. Use of appropriate task difficulty (students are continually and appropriately challenged)	I,	2.84	2.14
2. Well-organized and well-planned class activities	I, A	2.79	2.44
3. Teacher provision of frequent feedback on student performance	I, A	2.78	2.43
4. Clearly defined teacher expectation of content mastery	I, A	2.77	2.34
5. Teacher enthusiasm about course content	I	2.77	2.09
6. Teacher "with-it-ness" (awareness of classroom events and activities and minimization of disruptions by timely and nonconfrontational actions)	I	2.67	2.03
7. Teacher provision of helpful feedback to correct answers of students	I, A	2.67	2.21
8. Teacher promotion of student inquiry	I	2.67	2.10
9. Presence of a variety of classroom instructional activities and content	I, A	2.67	2.40
10. Teacher encouragement of constructive student responses to classroom questions	I	2.63	2.16
11. Teacher use of corrective feedback when students make an error	I, A	2.63	2.34
12. Teacher use of example and analogy to concretize abstract concepts and familiarize new ones	I	2.63	2.13
13. Teacher posing of questions that are cognitively challenging	I	2.62	2.15
14. Teacher use of learner accountability (maintaining student awareness of learning goals and expectations)	I	2.58	2.15
15. Personalized instructional strategies	I	2.57	2.18
16. Smaller instructional groups	I, A	2.53	2.43
17. Teacher promotion of student use of metacognitive strategies (e.g., strategies that are used to monitor, plan, and evaluate one's own performance)	I	2.52	2.08
18. Teacher use of group alerting (use of questioning/recitation strategies to maintain active participation by all students)	I, A	2.52	2.20
19. Use of goal direction (specific and explicit objectives of learning activities)	I, A	2.51	2.33
20. Teacher promotion of learning through student collaboration (e.g., peer tutoring)	I, A	2.50	2.20
21. Teacher provision of sufficient time for students to generate detailed responses to classroom questions	I	2.49	2.09

* Items that have influence means equal to or about 2.335 are designated with an I.
Items that have assessability means equal to or above 2.193 are designated with an A.

Table 2 (Cont'd)

Classroom Practices: Mean Influence, and Mean Assessibility for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
22. Cooperative learning strategies	I, A	2.49	2.28
23. Clearly presented academic, social, and attitudinal program goals	I, A	2.49	2.30
24. Discouragement of friction (students and teacher interact in a considerate and cooperative way, with minimal abrasiveness)	I	2.48	2.02
25. Lack of favoritism (equal treatment of all students and equal opportunities for participation)	I	2.48	1.93
26. Teacher use of smooth transition (e.g., avoidance of learning disruptions, closure of activities, and facility in initiating new activities)	I	2.47	2.13
27. Teacher selection of class content for meaningful understanding and application	I	2.46	2.06
28. Frequent, accurate measurement of higher order thinking skills	I	2.46	2.14
29. Teacher use of reinforcement contingencies	I, A	2.46	2.22
30. Teacher encouragement of positive verbal interactions among students	I	2.46	2.06
31. Teacher use of scaffolding (gradual transfer of responsibility from teacher to student)	I,	2.46	1.89
32. Teacher use of systematic sequencing of instructional events	I, A	2.46	2.21
33. Teacher use of rehearsal and elaboration of new concepts	I	2.45	2.08
34. Teacher use of direct instruction	I, A	2.45	2.40
35. Teacher direction of student attention to course content	I	2.44	2.13
36. Teacher use of instruction to recognize and dispel student misconceptions	I	2.43	1.95
37. Teacher use of flexible grouping to enable students to improve and change status/groups	I	2.43	2.13
38. Teacher posing of frequent academic questions	I	2.41	2.19
39. Discouragement of apathy (e.g., class members are concerned and interested in classroom activities)	I	2.40	1.88
40. Peer tutoring	I, A	2.38	2.28
41. Use of assessments that measure authentic, integrated, real-life skills	I	2.38	2.14
42. Encouragement of cohesiveness (members of class share common interests and values and emphasize cooperative goals)	I	2.34	1.94
43. Appropriate social behaviors coached by teachers		2.33	2.01

Table 2 (Cont'd)

Classroom Practices: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
44. Use of pacing that is appropriate for the majority of students		2.33	2.04
45. Use of assessment to create detailed learner profiles rather than simple classifications or nonelaborated total scores	A	2.33	2.24
46. Frequent requests by teachers for extended, substantive oral response		2.32	2.13
47. Mastery learning strategies	A	2.32	2.27
48. Frequent, accurate measurement of basic skills	A	2.32	2.61
49. Minimal disruption in classroom (e.g., no excessive noise, no students out of place during instructional activities)	A	2.31	2.22
50. Teacher encouragement of positive verbal interactions among students		2.29	1.88
51. Diagnostic-prescriptive methods	A	2.29	2.22
52. Teacher use of review and overview to increase redundancy of the content presented		2.28	2.16
53. Encouragement of democracy (explicit involvement of all students in some classroom decisions)		2.27	1.96
54. Teacher use of advance organizers		2.27	2.13
55. Cross-age tutoring	A	2.26	2.22
56. Encouragement of student satisfaction with class activities		2.25	1.92
57. Instructional teaming	A	2.22	2.23
58. Crisis management techniques to control classroom disruptiveness		2.19	2.04
59. Minimum occurrence of external classroom disruptions (e.g., broadcast announcements)		2.16	2.18
60. Teacher prescription of individualized instruction based on perceived match of learning tasks to student characteristics		2.16	2.16
61. Computer-assisted instruction	A	2.15	2.44
62. Encouragement of formality (students expected to follow explicitly stated rules concerning classroom conduct and activities)		2.11	2.17
63. Accessibility of educational program (overcoming architectural, communicative, and environmental barriers)		2.06	2.07

Table 2 (Cont'd)

Classroom Practices: Mean Influence, and Mean Assessibility for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
		2.05	2.03
64. Teacher use of formal language during instruction		2.02	1.93
65. Prescriptive instruction combined with aspects of informal or open education	A	1.98	2.40
66. Academic tracking for specific school subject areas		1.96	1.90
67. Discouragement of cliques (e.g., students work with many different classmates)	A	1.94	2.21
68. Multi-age grouping	A	1.92	2.27
69. More students with special needs in regular classes		1.77	2.05
70. Encouragement of competition among students			

Table 3

Curriculum Design and Delivery: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
71. Alignment among goals, contents, instruction, assignments, and evaluation	I, A	2.72	2.30
72. Use of materials tailored to students at different developmental levels	I, A	2.67	2.31
73. Use of materials tailored to students with different abilities	I, A	2.62	2.34
74. Availability of materials and activities for use with whole classrooms, small groups, or one-on-one instruction	I, A	2.61	2.37
75. Well-equipped classroom (readily available materials and equipment)	I, A	2.47	2.43
76. Use of materials that employ specific objectives	I, A	2.38	2.36
77. Use of materials that include assessments and diagnostic tests	I, A	2.37	2.48
78. Use of materials that reflect experiences of students	I	2.37	2.02
79. Teacher use of efficient and well-communicated classroom routines, rules, and procedures	I, A	2.35	2.35
80. Teacher use of written records to monitor student progress	A	2.29	2.34
81. Curriculum units structured around key discipline-based concepts	A	2.28	2.21
82. Use of student interests to guide selection of curriculum content		2.17	1.95
83. Availability of classroom aides	A	2.14	2.38
84. Well-configured classroom space		2.00	2.11
85. Use of culturally diverse materials		1.96	2.07
86. Teacher development of student self-responsibility for studying and for planning learning activities		1.91	1.91

* Items that have influence means equal to or above 2.335 are designated with an I.
Items that have assessability means equal to or above 2.193 are designated with an A.

Table 4

Schoolwide Practices and Policies: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
87. Safe, orderly school climate	I, A	2.84	2.41
88. School district decentralization	I, A	2.84	2.32
89. School policy that promotes parent involvement in improving students' school performance (e.g., ensuring completion of homework and regular school attendance, monitoring television viewing, and participating in school conferences)	I, A	2.72	2.20
90. Schoolwide promotion of increased direct instruction time	I, A	2.68	2.38
91. Teacher involvement in curricular decision making	I, A	2.68	2.27
92. Teacher involvement in instructional decision making	I	2.66	2.17
93. Schoolwide promotion of increased student time on task (amount of time students are actively engaged in learning)	I, A	2.63	2.22
94. Teacher and administrator consensus on school values, norms, and roles	I	2.61	1.96
95. Collaboration among school personnel	I	2.61	2.11
96. Low staff absenteeism	I, A	2.59	2.65
97. Schoolwide emphasis on and recognition of academic achievement	I, A	2.57	2.30
98. Low staff alienation	I	2.52	1.96
99. Schoolwide activities to promote positive, nondisruptive social behaviors	I	2.45	2.05
100. Effective schools program	I, A	2.44	2.25
101. Schoolwide activities to promote independent learning	I	2.43	2.07
102. Schoolwide activities to promote a positive attitude toward school, teachers, and subject matter	I	2.42	2.09
103. School policy that promotes parent involvement in the delivery of the instructional program (e.g., parents assist in classrooms, the school library, field trips)	I, A	2.42	2.24
104. Schoolwide activities to increase student academic aspirations	I	2.41	2.13
105. Schoolwide activities to promote perseverance on learning tasks	I	2.38	1.98
106. Explicit schoolwide discipline policy	I, A	2.35	2.47
107. Small school size	I, A	2.34	2.56
108. Schoolwide activities to promote motivation toward lifelong learning		2.33	1.98

* Items that have influence means equal to or above 2.335 are designated with an I.
Items that have assessability means equal to or above 2.193 are designated with an A.

Table 4 (Cont'd)

Schoolwide Practices and Policies: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
109. Schoolwide activities to promote self-esteem and self-confidence		2.33	2.08
110. Teacher involvement in resource allocation decision making		2.32	2.13
111. Schoolwide promotion of increased time on homework		2.31	2.12
112. Schoolwide promotion of increased out-of-school time spent by students on leisure reading		2.30	1.84
113. Low staff turnover	A	2.26	2.43
114. Explicit schoolwide attendance policy	A	2.23	2.59
115. Schoolwide activities to discourage delinquent and criminal behavior		2.22	2.11
116. Explicit schoolwide grading and academic progress policies	A	2.20	2.39
117. Schoolwide activities to increase student occupational aspirations		2.16	2.06
118. School policy that promotes parent involvement in planning the instructional program (e.g., parents review materials, help plan curriculum)		2.09	2.02
119. Schoolwide promotion of increased out-of-school time spent by students in informal learning experiences (e.g., museum trips, scouts)		2.09	1.78
120. Schoolwide activities to discourage student drug use		2.04	2.14
121. Schoolwide promotion of student participation in clubs and extracurricular activities		2.03	2.14
122. Schoolwide activities to encourage friendships rather than cliques		1.93	1.78
123. Minimum use of suspension and expulsion for disciplinary purposes	A	1.90	2.25
124. Schoolwide discouragement of students spending out-of-school time viewing noneducational television		1.85	1.58
125. Schoolwide promotion of increased out-of-school time spent by students viewing educational television		1.69	1.64

Table 5

Federal, State, and District Policies: Mean Influence and Mean Assessability for Each Item

Item	IA*	Mean Influence on Learning	Mean Assessability
126. Central office assistance and support for school programs	I	2.53	2.18
127. Board of education support for school programs	I, A	2.52	2.24
128. Academic course and unit requirements	I, A	2.39	2.64
129. Higher per-pupil expenditure	I, A	2.35	2.46
130. Provision of social services for students	A	2.33	2.21
131. Contractual limits on class size	A	2.28	2.59
132. Chapter 1 (compensatory education) funding	A	2.18	2.46
133. PL 94-142 (handicapped) funding	A	2.16	2.43
134. Increased length of school year	A	2.15	2.46
135. Teacher licensure requirements	A	2.14	2.56
136. Increased length of school day	A	2.07	2.37
137. Small school district size	A	2.06	2.51
138. Degree of state control over curriculum	A	2.05	2.23
139. Minimum competency testing requirements	A	2.04	2.53
140. Title VII (bilingual) funding	A	1.93	2.26
141. Limited school district bureaucratization		1.91	2.07
142. Contractual restrictions on activities performed by aides	A	1.87	2.23
143. Degree of state control over textbooks	A	1.86	2.22
144. School district decentralization	A	1.85	2.19
145. Contractual limits on after-school meetings	A	1.75	2.22
146. Efficient transportation system	A	1.73	2.22

* Items that have influence means equal to or above 2.335 are designated with an I.
Items that have assessability means equal to or above 2.193 are designated with an A.

Table 6

Overall Mean Influence and Assessability by Scale

Scale	Mean Influence	Mean Assessability
Classroom Practices	2.39	2.16
Design and Delivery of Curriculum	2.33	2.25
Schoolwide Practices and Policies	2.36	2.15
Federal, State, and District Policy	2.10	2.35
Grand Mean	2.34	2.19

Table 7

Pearson Product Moment Correlations for Researcher and Practitioner Influence and Assessability Ratings

	Researcher Influence	Researcher Assessability	Practitioner Influence	Practitioner Assessability
Researcher Influence	100			
Researcher Assessability	-.03	1.00		
Practitioner Influence	.87	-.10	1.00	
Practitioner Assessability	.47	.68	.52	1.00

Table 8

One-Way Analyses of Variance Comparing Ratings of Professional Groups

Dependent Variables	N	Mean Square		F(p)
		Sample	Residual	
Influences				
Classroom Practices	1823	3.21	.10	32.65 (.0001)
Curriculum Design and Delivery	1823	2.34	.14	16.27 (.0001)
Schoolwide Practices and Policies	1823	5.16	.11	47.30 (.0001)
Federal, State, & District Policies	1823	3.72	.14	27.23 (.0001)
Total	1823	3.65	.08	46.08 (.0001)
Assessability				
Classroom Practices	1823	.75	.14	5.55 (.0001)
Curriculum Design and Delivery	1823	.31	.17	1.77 (.089)
Schoolwide Practices and Policies	1823	.75	.13	5.77 (.0001)
Federal, State, & District Policies	1823	3.04	.17	18.36 (.0001)
Total	1823	.29	.09	3.15 (.003)

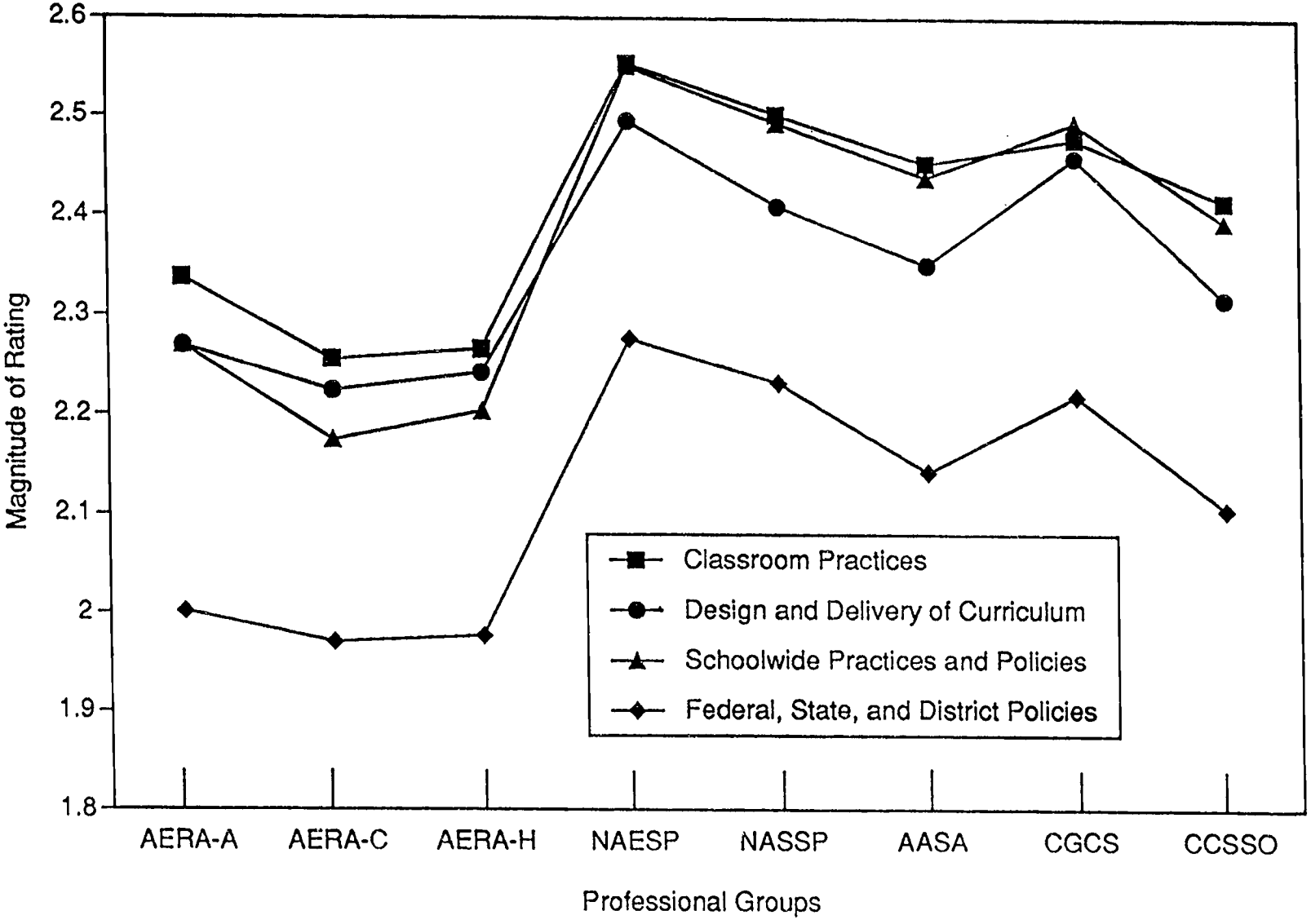


Figure 1. Mean Influence Ratings for each Professional Group by Item Catagory

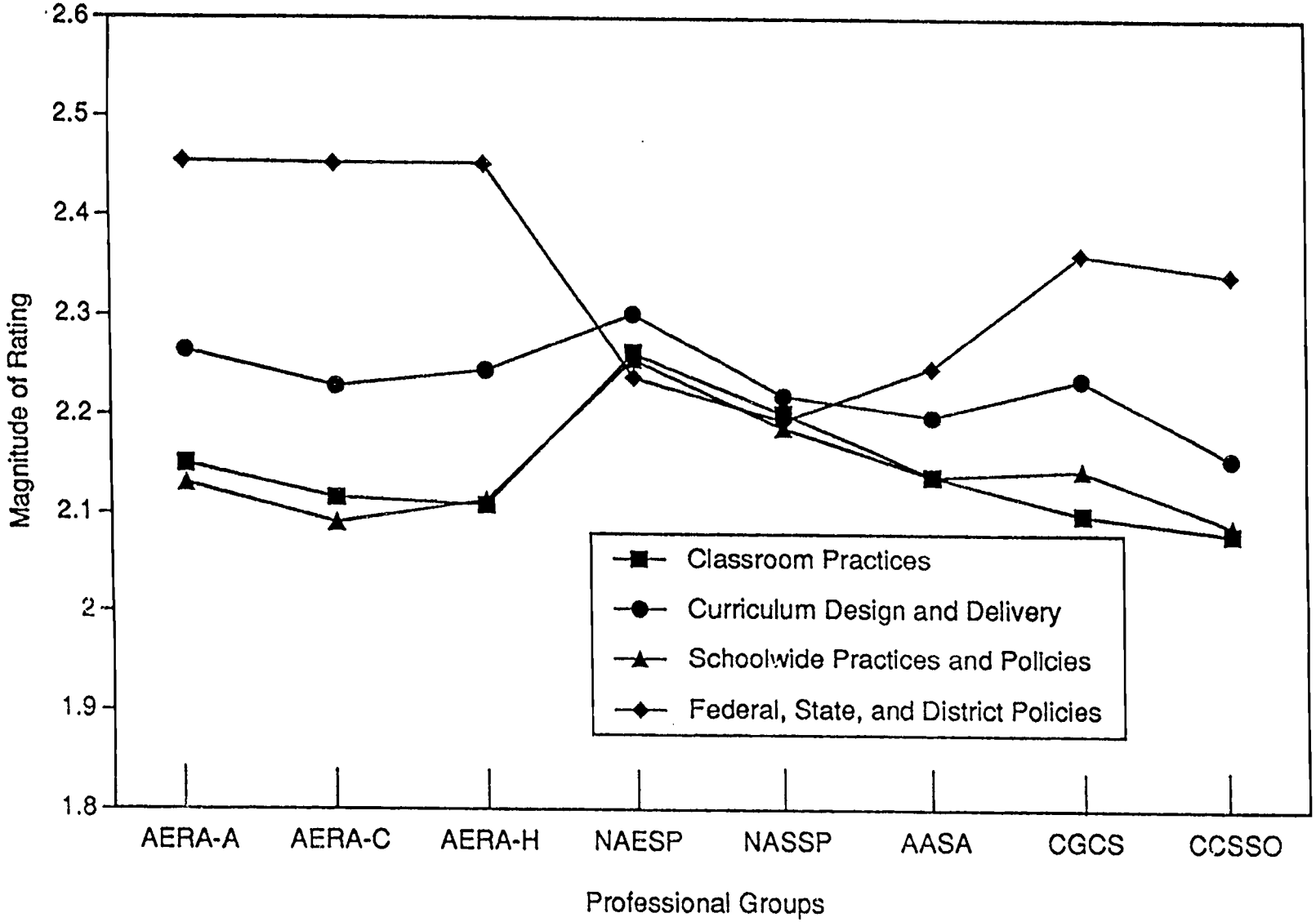


Figure 2. Mean Assessability Ratings for each Professional Group by Item Catagory

THE NATIONAL CENTER ON EDUCATION IN THE INNER CITIES

The National Center on Education in the Inner Cities (CEIC) was established on November 1, 1990 by the Temple University Center for Research in Human Development and Education (CRHDE) in collaboration with the University of Illinois at Chicago and the University of Houston. CEIC is guided by a mission to conduct a program of research and development that seeks to improve the capacity for education in the inner cities.

A major premise of the work of CEIC is that the challenges facing today's children, youth, and families stem from a variety of political and health pressures; their solutions are by nature complex and require long-term programs of study that apply knowledge and expertise from many disciplines and professions. While not forgetting for a moment the risks, complexity, and history of the urban plight, CEIC aims to build on the resilience and "positives" of inner-city life in a program of research and development that takes bold steps to address the question, "What conditions are required to cause massive improvements in the learning and achievement of children and youth in this nation's inner cities?" This question provides the framework for the intersection of various CEIC projects/studies into a coherent program of research and development.

Grounded in theory, research, and practical know-how, the interdisciplinary teams of CEIC researchers engage in studies of exemplary practices as well as primary research that includes longitudinal studies and field-based experiments. CEIC is organized into four programs: three research and development programs and a program for dissemination and utilization. The first research and development program focuses on the *family* as an agent in the education process; the second concentrates on the *school* and factors that foster student resilience and learning success; the third addresses the *community* and its relevance to improving educational outcomes in inner cities. The focus of the *dissemination and utilization* program is not only to ensure that CEIC's findings are known, but also to create a crucible in which the Center's work is shaped by feedback from the field to maximize its usefulness in promoting the educational success of inner-city children, youth, and families.

CEIC Senior Associates

Margaret C. Wang
Director, CEIC and CRHDE
Professor of Educational Psychology
Temple University

Aquiles Iglesias, Associate Director, CEIC
Associate Professor and Chair,
Speech-Language-Hearing
Temple University

Lascelles Anderson
Professor and Director,
Center for Urban
Educational Research and
Development
University of Illinois
at Chicago

David Bartelt
Associate Professor of
Geography and Urban
Studies and Director,
Institute for Public
Policy Studies
Temple University

William Boyd
Professor of Education
Pennsylvania State
University

Gayle Dakof
Visiting Assistant
Professor of
Counseling Psychology
Temple University

H. Jerome Freiberg
Professor of Curriculum
and Instruction
University of Houston

Michael Goetz
Associate Professor
of Economics
Temple University

Geneva Haertel
Senior Research Associate
CRHDE
Temple University

John Kovach
Director of Outreach
and Dissemination
CEIC

Howard Liddle
Professor of Counseling
Psychology
Temple University

Maynard C. Reynolds
Professor Emeritus of
Educational Psychology
University of Minnesota

Leo Rigsby
Associate Professor
of Sociology
Temple University

Judith Stull
Associate Professor of
Sociology
La Salle University

William Stull
Professor and Chair,
Department of Economics
Temple University

Ronald Taylor
Associate Professor of
Psychology
Temple University

Herbert J. Walberg
Research Professor
of Education
University of Illinois
at Chicago

Hersholt C. Waxman
Associate Dean for
Research and Associate
Professor of Curriculum
and Instruction
University of Houston

Kenneth Wong
Associate Professor
Department of Education
and Social Sciences
University of Chicago

William Yancey
Professor of Sociology
Temple University

Andrea Zetlin
Associate Professor
Special Education
California State
University, Los Angeles

FOR MORE INFORMATION, CONTACT JESSE R. SHAFER, INFORMATION SERVICES COORDINATOR (215/204-3000)