



***Poway Unified School District and
Poway Federation of Teachers
K-5 Assessment Study Team***

**Review of Literature and White Paper on Policy
Recommendations for Poway Unified School District**

February 20, 2003

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Acknowledgements

This report was prepared through the combined efforts of the members of a joint task force commissioned by the Poway Unified School District's (PUSD) Interest Based Problem Solving Team. The 20 members of **The K-5 Assessment Study Team** were selected because of their knowledge and experience related to evaluation and assessment and their interest in continued study and review of this topic. Together, they represent a composite of the varied roles and responsibilities contained within the Poway Unified School District relative to student evaluation and assessment, K-5.

We are grateful to the Study Team members for their professional contributions to this report and for their personal commitment to this effort. The research-based recommendations contained in this document provide direction; enabling the Poway Unified School District to continue to progress in its efforts to effectively support high quality learning for each of its students.

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INTRODUCTION

The primary mission of the Poway Unified School District, *...ensuring student mastery of the knowledge, skills, and attitudes that are essential for success in school and in a diverse society*, is reflected in the PUSD mission statement and core values. This mission is actualized through a commitment to continuous improvement and the hard work and dedication of the PUSD learning community. A representative body of the local learning community, the PUSD Interest Based Problem Solving Team (IBPS) meets regularly to discuss issues and develop policy enabling the District's commitment to continuous improvement.

In spring of 2002, the IBPS team created the *K-5 Assessment Study Team*. Under the direction of Pat Silva, PFT Education Issues Director, and Ray Wilson, Learning Support Services Director for Assessment, a team of 10 teachers and 5 administrators began studying best practices, educational research, and current PUSD practice related to the use of assessment and evaluation with elementary school students (Grades K-5). The Study Team members were selected from numerous applicants for their professional expertise and breadth of educational experience.

The IBPS directive empowered the Study Team to conduct research and draft a white paper outlining policy recommendations around the question:

How can assessment policies and practices best serve the instructional needs of students and help improve the teaching and learning processes in our District?

The intent of the IBPS directive and the work of the Study Team was to develop research-based policy recommendations for the most effective use of evaluation and assessment to support learning for all elementary grade students in the Poway Unified School District.

The members of the Study Team met after school twice during the month of May 2002, to define the task. After the end of the school year, the Study Team worked for two full days in June to identify processes and procedures and begin looking at current local practice. During the summer months, members of the group conducted targeted individual research.

At the beginning of the 2002-2003 school year, the Study Team began bi-monthly after school meetings. The rich conversations, professional dialogue, and comprehensive research of the Study Team members and the directive given to it by the IBPS team provide the foundation for the following report and the recommendations contained within it.

RECOMMENDATIONS

1. Establish a comprehensive, coherent and continuous assessment system based upon research.
 - a. Comprehensive: includes a variety of measures to ensure the accurate information necessary for good educational decisions
 - b. Coherent: includes measures that align with curriculum and instruction and complement each other
 - c. Continuous: measures student progress over time
2. Suspend District administration of all non-mandated tests temporarily for the purpose of establishing a review process of District assessments.
3. Establish procedures to build and maintain District assessments.
4. Provide research-based learning opportunities to develop assessment literacy in all persons affected by the assessment and evaluation system.
5. Employ technology systems to efficiently manage and communicate information about student progress and dynamically administer assessments.

FINDINGS

1. To be effectively used to improve student learning, assessments at all levels-from classroom to state-must work together in a system that is comprehensive, coherent, and continuous.
2. All assessments can be measured for effectiveness by a set of common attributes.
3. Assessment is used for two primary purposes: Assessment of Learning and Assessment for Learning.
4. Professional development activities and community education efforts must ensure that all persons affected by assessment and evaluation systems understand the types and purposes of a variety of assessment tools and how to access, understand, interpret and use the resulting assessment information to support learning.
5. Technology support is a necessary component of an effective comprehensive, coherent, and continuous assessment and evaluation system. A well-designed and well-functioning information management and communication system enables the

efficient management and use of assessment information to support student learning.

Recommendations

RECOMMENDATION #1

Establish a comprehensive, coherent and continuous assessment system based upon current research.

Rationale:

It is the recommendation of the Study Team that a comprehensive, coherent and continuous system of assessments will allow for the assessment and evaluation of individual students, groups, and programs. The primary purpose of the assessment system should be the improvement of student learning. A comprehensive, coherent and continuous assessment system reflects a broadly held consensus of educational research in the area of assessment. **(Finding # 1)**

The Study Team acknowledges that a well-coordinated, high quality assessment system is central to student learning and effective educational decision making. However, a review of current Board Policy and Administrative Procedures indicates that current policy lacks an overall systematic structure and that Board Policies regarding the use and deployment of assessments have been developed in isolation from each other over many years. **(Finding # 4)**

In a climate where the results of large-scale state tests have become the primary tool for public accountability, it is essential that the District develop a system of complimentary assessments that support the work of students and teachers at the classroom level. Since 1997, the state has implemented an array of tests that have changed the landscape of assessment, placing a heavy emphasis on large-scale, standardized group assessments. The District's assessment system has not been adequately modified in response to changes at the state level. It is the recommendation of the Study Team that the findings of its research into the elements of an effective, efficient educational assessment system be applied. **(Finding # 4)**

RECOMMENDATION # 2

Suspend District administration of all non-mandated tests temporarily for the purpose of establishing a review process of District assessments.

Rationale:

District assessments play an important and distinctly different role than the State of California assessments in that they are:

- Uniquely aligned to District standards and more closely reflect what is being taught (valid)
- Administered on schedules that are most beneficial to teachers and students to inform instruction. (continuous, multiple and immediate)
- Performance-based, thereby providing an alternative to multiple choice formats. (valid, multiple) **(Finding # 2, # 3)**

Research indicates assessments that are the most powerful and meaningful are those that reside closest to teaching and learning. The Study Team believes that temporarily moving responsibility and ownership for District assessments to the school sites as formative assessments will not only support greater influence on student learning, but is also consistent with research findings. A recess in standardized District testing would permit the District to evaluate and systematically install a system of assessments that compliment state-mandated testing, thereby creating a system of complimentary measures. **(Finding # 3)**

Temporary suspension of all standardized administration of District tests would allow the District to establish a review process for the evaluation of District tests. The Study Team recommends that standardized District testing be reinstated on a test-by-test basis as the need, purpose and use of each District test is evaluated. A designated review process will be developed and used for this purpose. **(Recommendation # 3)**

The Study Team recognizes that many schools and departments have incorporated District testing results into instructional and school improvement planning and acknowledges that this work need not be interrupted. Therefore, the Study Team recommends that District assessments continue to be available for use. LSS shall make scoring and reporting services available to schools and shall facilitate the collection of raw data and the production and distribution of summary reports.

RECOMMENDATION # 3

Establish procedures to build and maintain District assessments.

Rationale:

The Study Team recommends the establishment of a process for the continuous review of the District's assessment and evaluation system. This process would be developed in accordance with the PUSD Guiding Principles for Assessment (Appendix A). Since

1997, the State has implemented an array of norm-referenced, criterion-referenced and performance-based tests that have tipped the balance of assessment in favor of large-scale, standardized testing. The District's attempts to address perceived deficiencies in the State testing system have proven to be frustrating. The District needs systematic procedures, guidelines, and evaluation criteria that can be applied to the adoption, modification, or elimination of District-wide tests.

The research conducted by the Study Team found well-established, research-based criteria for the evaluation of educational tests. A thorough evaluation of the District's assessment plan requires a systematic process to apply these standards. The process should address:

- the specific purpose of each assessment in creating a coherent system of measures that work together and provide a comprehensive picture of student achievement.
- the accurate, timely reporting of results to students, teachers and parents that facilitates instructional decision-making.
- the degree to which every student, each school and the District as a whole is progressing toward the achievement of established learning goals over multiple years.
- the validity, reliability and fairness of each assessment based upon its purpose.
- the evaluation of instructional programs and/or practices relative to state standards and national norms.
- the cost and feasibility of implementation
(Findings # 2, # 3)

The process for continuous review should be established in Board Policy, utilizing input from parents and teachers, as an Administrative Procedure. The Study Team's research found that clearly articulated policies and procedures are a necessary component of an effective assessment system. Current Administrative Procedure 3.30.1 (1991) should be updated to include elements of most current research. (Findings # 4, # 6)

RECOMMENDATION # 4

Provide research-based learning opportunities to develop assessment literacy in all persons affected by the assessment and evaluation system.

Rationale:

A critical research finding underscores the fact that teacher preparation programs and professional development activities have not prepared teachers for the role they play in assessment-driven instruction. PUSD professional development opportunities must enable teachers to successfully identify and implement assessment tools to drive instructional decisions. (Finding # 4)

Professional development and community education activities related to the effective use of assessment must increase knowledge of tests and measurements for all users – teachers, parents and students. In addition, teachers will need time to collaborate with colleagues, identify developmental milestones for students, and design assessment tools that are integrated with PUSD Academic Standards. These activities will enable rich curriculum development work and the effective use of assessment information in educational decision-making. **(Finding # 4)**

Formalized external assessment has been placed at the center of state and national education reform efforts. The consensus of educational research is that these formalized, external assessments do little to support student learning unless they are part of the day-to-day teaching and learning activities within the classroom. It is imperative that, through professional growth opportunities and community education, we build structures to enable this integration to occur. **(Finding # 4)**

RECOMMENDATION # 5

Employ technology systems to efficiently manage and communicate information about student progress and dynamically administer assessments.

Rationale:

Well-managed educational technology is indispensable for an effective assessment and evaluation system. A well-designed and accessible technology-based system can enable the efficient management of assessment information, enhancing its utility as an instructional resource. Recent advances in assessment technology offer exciting opportunities to immediately adapt assessment items on the basis of the examinee's performance; score and report performance, and create a comprehensive test history for every child. **(Finding # 5)**

Currently, the PUSD Educational Technology Instructional Support Department (ETIS) and Learning Support Services (LSS), in collaboration with PUSD teachers and administrators, is building a technology-based system that will provide for the immediate availability of student information to all users via the internet. The system is already enabling the sharing of information between the various data bases used within PUSD. Plans have been discussed to incorporate curriculum standards, student progress information, and learning and assessment activities with the system. Future plans include interactive communication capabilities that will enable collaboration between students, parents, teachers, and others affected by the PUSD Assessment and Evaluation System. **(Finding # 5)**

It is the recommendation of the Study Team that the District develop a technology-based assessment management system that enhances the management and delivery of assessment information and provides opportunities to improve the sophistication, design

and administration of educational assessments. Development of the system should be coordinated with procedures to review and, if necessary, amend the District Assessment Plan. (**Recommendation # 3**)

Findings

FINDING #1

To be effectively used to improve student learning, assessments at all levels—from classroom to state—must work together in a system that is comprehensive, coherent and continuous.

A review of the research revealed that no single assessment or type of assessment used alone can provide a comprehensive picture of what students know or are able to do “The more purposes a single assessment aims to serve, the more each purpose will be compromised.” (*Knowing What Students Know*, page 225.) Multiple assessments are needed to provide the various types of information that are required at different levels of the educational system. Used in concert, they can provide valuable multiple perspectives of individual achievement while supporting the system’s need to evaluate program effectiveness.

A well-developed assessment system requires the careful and prudent deployment of different types of assessments, thereby creating a matrix of measures that are coherent and coordinated. Students must be provided adequate opportunities to demonstrate their knowledge and skills so that sound, fair judgment can be made. However, redundant, impractical procedures can be inefficient and needlessly disruptive, taking away valuable instruction time.

“All students do not need to be tested in all areas every year. Specifically, developmentally appropriate benchmarks for each academic area and for each grade level must be identified.” (Wiggins, Grant; *The Case for Authentic Assessment*, ERIC Digest, 1990)

“Student evaluation procedures should be practical so that they produce the needed information in efficient, non-disruptive ways.” (The Student Evaluation Standards: How to Improve Evaluations of Students; Joint Committee on Standards for Educational Evaluation, Arlen R. Gullickson, Chair)

Another aspect of a coherent system is that all assessments must be correlated to standards and clearly defined outcomes. All assessments used in a coherent system must work together to create an accurate and trustworthy estimation about the knowledge and skills of each student or each group of students. Poway Unified’s Guiding Principal of Assessment # 4 states, “Alignment of District, state and classroom assessments is necessary to maximize student learning.” The validity of each test and the relationship of

one test to another to develop a complete and trustworthy estimate of each student's knowledge and skills are essential components of a coherent assessment system.

“Assessments do not function in isolation, an assessment's effectiveness in improving learning depends on its relationships to curriculum and instruction. Ideally, instruction is faithful and effective in relation to curriculum, and assessment reflects curriculum in such a way that it reinforces the best practices in instruction.” (The Science and Design of Educational Assessment, 2001)

In addition to comprehensive and coherent, an ideal assessment system should be continuous. Student progress must be measured over time. “By focusing on student growth over time, we can measure and report the impact of curriculum and instruction on student performance regardless of individual differences and starting points or levels of prior knowledge. “... When aligned with academic standards, course outcomes, and instructional practices, assessment and evaluation provide direction for instructional decision-making. It is in this context, and as part of a comprehensive, coherent, and continuous system, that assessment and evaluation provide the best possible support for student learning.

FINDING #2

All assessments can be measured for effectiveness by a set of common attributes.

An abundance of research supports the need for a common set of principles to ensure the effectiveness of each individual assessment in providing and accurate measurement of progress toward the intended learning objectives.

- A. Assessments must be valid. This means the administration of the test and the specifics of the assessment are trustworthy. Conclusions about the knowledge, skills, attitudes, and behaviors measured must be free from misrepresentation. Validity is affected by a variety of factors, including primary language, alignment to learning, clarity of directions, number of characteristics being assessed in each question/observation, and scoring scenarios.

“Validity is the single most important issue in student evaluation. If the evaluation is to fulfill its intended purpose, then the inferences and judgments made must be true and defensible. Invalid inferences or judgments can do great harm.” (The Student Evaluation Standards, The Joint Committee on Standards for Educational Evaluation, A.R. Gullicksoin, Chair. 2003 Corwin Press

- B. Assessments must be reliable. Reliability in assessment is the ability to use the assessment as an accurate measurement with different students, or when given at different times. Determination of reliability is often a complex statistical procedure. A general rule is that the higher the consequences of a student’s performance on an assessment, then the greater the need for in-depth analysis of reliability. Reliability on assessments can be positively affected by developing clear and easy to understand procedures. Other considerations that enhance reliability are consistency in scoring between assessors, adequate training, and use of multiple assessments. It is the responsibility of the District to ensure high reliability of its assessments.

“Researchers and measurement experts must ask themselves major questions to ensure that their testing programs are sound:

- *Is the test valid for the purposes for which it will be used? Does it measure what it says it does; that is, does it sufficiently reflect the content being assessed and produce results that support whatever decisions are made on the basis of the test?*
- *Is the test reliable? Are test results reproducible; that is, do differences in test scores consistently reflect real differences in student knowledge or are they the result of other factors such as scoring errors, bias of the raters (as in assessment of writing samples or portfolios), or differences in how the test is administered?”*

(High Stakes Testing: Trends and Issues, Policy Brief by Anne Lewis, National Education Policy Writer, Mid-Continent Research for Education and Learning, April 2000)

- C. Assessments must be fair. Assessments must be unbiased and free from arbitrary judgments or systems that influence interpretations differently for sub groups or individual students. A fair assessment is one that is developed from a defensible set of criteria and includes supporting documentation/data. A fair assessment is also adaptable for the exceptional circumstances of certain individuals. Fairness in assessments can be positively affected by alignment of the measurement to the goals and instructional practices, and by consistent administration. Clear criteria that eliminate influences not related to the purpose of the assessment, and addressing the scoring of assessments for students with exceptional needs also promote fairness.

“Concern for fairness in testing is pervasive...in most testing situations the role of the examiner and the examinee are sharply unequal in status. A professional’s inferences and reports from test findings may markedly impact the life of the person being examined. Attention to these aspects of test use and interpretation is no less important than more technical concerns.”

American Educational Research Association, American Psychological Association, American Council on Measurement in Education. Standards for Educational and Psychological Testing. 1999.

- D. Assessments should be aligned to standards. This requires that the scope of the evaluation be carefully focused and sufficiently comprehensive to ensure the assessment clearly represents the content standard(s). Alignment to standards is enhanced by removing items irrelevant to the purpose, by clearly stating the purpose of the assessment, and by monitoring the accuracy of the assessment when compared with other measures of performance.

“There is widespread agreement that assessments play an important role in shaping instruction and thereby influencing student learning. Subjects assessed are given more attention than ones that are not assessed. When well aligned with content standards, assessments make the intent of the standards explicit and focus attention on content that is deemed important for teachers to teach and for students to learn. But the flip side of that is also true; that is, when there is poor alignment, assessments can distort the intent of the content standards.” (The Design and Evaluation of Educational Assessment and Accountability System, CSE Technical Report 539, Robert L. Linn, Center for the Study of Evaluation, National Center for Research on Evaluation, Standards, and Student Testing (CRESST)University of California, Los Angeles, April 2001.)

- E. Assessments should be aligned to classroom instruction. Effective assessments mirror the instructional modes and learning activities employed in the classroom. The assessment should measure what students are actually being taught.

“Assessments do not function in isolation; an assessment’s effectiveness in improving learning depends on its relationships to curriculum and instruction. Ideally, instruction is faithful and effective in relation to curriculum, and assessment reflects curriculum in such a way that it reinforces the best practices in instruction.”(The Science and Design of Educational Assessment, 2001.)

- F. The purpose of each assessment must be clearly defined for the student, parent and teacher. All who are involved in the assessment, including the student, must understand the purposes and share the goals that direct the learning. Assessments best serve all parties when they are balanced to identify both strengths and weaknesses, have clearly defined performance expectations, and have results that are communicated in a timely manner. The reporting of information should be of value to students, teachers and parents, and be centered upon learning goals and plans for improvement that all understand.

“For assessments to be effective, students must understand and share the goals for their learning. Students learn more when they understand and participate in developing the criteria by which their work will be evaluated, when they engage in peer and self-assessment during which they apply those criteria.These practices develop students metacognitive abilities, which are necessary for effective learning.” (Shepard. (February 2000). The Role of Assessment in a Learning Culture. Presidential Address presented at the annual meeting of the American Educational Research Association, New Orleans, April 26.)

FINDING #3

Assessment is used for two primary purposes: Assessment of Learning and Assessment for Learning.

Both formal and informal assessments are essential components of a comprehensive assessment system. No single assessment can provide teachers and students with all the information needed to guide decisions about teaching, learning, and growth over time.

Assessment *of learning* is a tool for measuring performance at the end of a predetermined amount of instruction. It takes many forms, but generally represents the more formal assessments used in classrooms, such as weekly quizzes and end-of-the-unit chapter tests. Its most formal use is the standardized, high-stakes, end-of-the-year, assessment that is *norm-referenced* and compares students across the nation. Assessment *of learning* and *summative* assessment are terms used interchangeably.

Assessment *of* learning has a primary purpose of determining what learning has taken place and evaluating the curriculum. It also serves to audit student progress and monitor programs and practices for educational accountability.

Assessment of learning:

- helps to determine whether a student has attained a pre-determined level of competency after completing a unit of instruction.
- is viewed as a way to measure performance and help improve instruction
- predicts future success through the identification of leading indicators
- measures academic rigor through reliable and valid testing procedures

“Though further removed from day-to-day instruction than classroom assessments, large-scale assessments have the potential to support instruction and learning if well designed and appropriately used.” (The Science and Design of Educational Assessment, 2001.)

In contrast, assessment *for* learning is integrated with instruction and provides continuous feedback to the teacher that serves to guide and formulate instruction. It informs the teacher about what activities and assignments will be the most useful, what level of teaching is most appropriate, and provides diagnostic information that guides the teacher to modify and differentiate instruction for the learner.

The primary purpose of assessment *for* learning is to guide instruction and assist learning. It provides teachers and students with specific information about student strengths and difficulties with learning.

“Teachers use information from day-to-day assessments to design their instruction to meet students’ individual needs. Students can use the information as well to determine which skills and knowledge they need to study further and what adjustments in their thinking they need to make.” (Knowing What students Know, Committee on the Foundations of Assessment, Washington, D.C., National Academy Press.)

A key element of assessment *for* learning is timely feedback of assessment data between teacher and student. As students perform, teachers evaluate competency (learning), adjust and revise their instruction, and provide further guidance (feedback) with the goal of improved learning. Teachers use this continuous, interactive flow of information gained through assessment to advance and not merely “check on” student learning. Assessments *for* learning take many forms, such as portfolios (collections of student work over time), teacher observations, and student demonstrations. When assessment is used *for* learning, assessment begins to look more like teaching and less like testing.

Assessment *for* learning:

- is integrated with instruction
- provides accurate diagnostic information about students (eliciting not only what the student doesn't know, but what he/she does know)
- guides instructional decisions and is an on-going component of instruction
- involves students' responsibility in their own learning (avoiding methods that treat learners as passive recipients)
- includes methods that are flexible with timely feedback (implementing a consistent process of performance and feedback)

“If students are to develop understanding, assessment must be an ongoing part of instruction. To teach for understanding we must attend closely to assessment. We seek evidence of student understanding through student performance. Assessment is not something tacked on to learning. It is an essential ongoing component of instruction that guides the process of learning. There is a constant process of performance and feedback.” (Rebecca Simmons,, The Horse Before the Cart: Assessing for Understanding. Educational Leadership, Vol. 51, No. 5, February 1994)

A key component of both assessment *of* learning and assessment *for* learning is the understanding that no one test fits all. Therefore, it is essential that measures be put into place that ensure a balance is maintained between assessment *of* and assessment *for* learning. Assessments must be flexible and provide a variety of opportunities for students to share their level of understanding. Multiple measures must be in place to provide evidence of student learning and as a check on the effectiveness of the curriculum, as well as a means to improve instruction and learning for every student.

“The process of appraising students fairly and effectively requires multiple measures constructed to high standards. Useful and meaningful evidence includes profiling of multiple elements of proficiency, with less emphasis on overall aggregate scores. It is essential to assess diverse aspects of knowledge and competence, including how students understand and explain concepts, reason with what they know, solve problems, are aware of their states of knowing, and can self-regulate their learning and performance. Achieving these goals requires a strong connection between educational assessments and modern theories of cognition and learning. The assessment design process must be a multidisciplinary and collaborative activity. Assessment should both inform and enhance student achievement.” (Richard Stiggins, Assessment Crisis: The Absence of Assessment FOR Learning, Phi Delta Kappan, Vol. 83, No. 10, June 2002)

Substantial research supports the important role that assessment *of* learning and assessment *for* learning serve in the context of teaching and learning. Skilled teachers effectively employ both measures interchangeably as they interpret data to inform instruction and maximize student learning. The overwhelming message that comes through in much of the research is the over emphasis that is often placed on test scores that result from assessments *of* learning. Instead, there should be emphasis placed on *both* assessment *of* learning and assessment *for* learning, both of which serve vital roles in improving student learning.

“Just as assessment impacts student learning and motivation, it also influences the nature of instruction in the classroom. When assessment is integrated with instruction it informs teachers about what activities and assignments will be the most useful, what level of teaching is most appropriate, and how summative assessments provide diagnostic information.” (James McMillan, ERIC Digest, Basic Assessment Concepts for Teachers and School Administrators, ED447201, ERIC Clearinghouse on Assessment and Evaluation, 2000-11-00.)

Finding #4

Professional development activities and community education efforts must ensure that all persons affected by assessment and evaluation systems understand the types and purposes of a variety of assessment tools and how to access, interpret and use the resulting assessment information to support learning.

It is vital that teachers develop a knowledge base that integrates assessment and evaluation activities with classroom instruction and empowers students to be active participants in assessing their progress and evaluating their attainment of learning goals. Parents, too, are seen as partners in a triad that centers upon student learning of clearly identified academic targets.

Students have unique learning needs relative to participating as partners in their own assessment. Clear learning targets/instructional goals must become a part of all units of study. Opportunities for self-assessment of progress and specific feedback to validate those assessments and/or identify improvement steps are essential. Receiving and using this feedback helps students understand the role of assessment as a support for their learning and empowers them in ways that make students feel capable of learning.

On-going formative assessment that is integrated with instruction and provides daily feedback to students was identified as the ideal assessment model. Teachers and students understand the learning targets and are consistently aware of student progress toward those targets. Feedback provides opportunities for self-knowledge and suggestions for next steps. Because they are partners in this triad, parents, too, are in a position to provide additional support to their students.

All persons affected by assessment systems need an understanding of the various types of assessment tools and how to interpret the results. In addition, they need to have easy access to assessment information and benchmarks against which to judge the level of student progress.

Clearly, professional development and community educational activities are an integral component of successful assessment and evaluation systems. These efforts ensure the proper interpretation and use of assessment information, provide an essential link between instructional practice and student learning, and help maintain the system's focus on supporting student learning.

In addition, teachers need opportunities to collaborate with colleagues to define standards, develop units of study that include a variety of ways to monitor student progress, collectively evaluate student work, and define rubrics for objective scoring.

“To understand the types and purposes of assessment, educators need professional development opportunities that form a true understanding of assessment tools that can yield valid inferences about student understanding and thinking, as well as methods of interpreting data derived from assessments. (National Research Council, Knowing What Students Know: The Science and Design of Educational Assessment, National Academy Press, 2001.)

“Effective assessment practices empower students to ask reflective questions about their own learning and consider efficient strategies for learning what comes next. Students need to be taught skills of evaluation and to have routine and challenging opportunities to practice making judgments and validating them.” (Earl, L. and LeMahieu, P. (1997). Rethinking Assessment and Accountability. Rethinking Educational Change with Heart and Mind. Virginia: Association for Curriculum and Supervision (ASCD) Yearbook.)

“Excellent teaching includes a complex combination of assessment, matched

instruction, and specific feedback. Teachers must be educated in how students learn and how learning can be assessed. Teachers need to be provided with training to understand how to use tools that can yield valid inferences about student understanding and thinking, as well as methods of interpreting data derived from assessments. By understanding assessment teachers will increase their diagnostic expertise to make informed decisions about what to change or not change in their teaching. Effective professional development must be in place for teachers to translate research into classroom practice. (The National Research Council, Knowing What Students Know: The Science and Design of Educational Assessment, 2001.)

“We can realize unprecedented gains in achievement if we turn the current day-to-day classroom assessment process into a more powerful tool for learning”. Benefits include:

Student benefits from assessments for learning:

- *Become more confident as they experience success*
- *Allows for risk taking as they continue to learn*
- *Greater achievement*
- *Understand what it means to be in charge of own learning*
- *Foundation for lifelong learning*

Teachers benefit as:

- *Students become more motivated*
- *Instructional decisions are informed*
- *Save time due to their ability to develop and use classroom assessments more efficiently*

Parents benefit as:

- *Higher achievement and greater enthusiasm for learning in the children*
- *Understand the children are learning to manage their own learning*

Administrators benefit as:

- *See the reality of meeting accountability standards and from public recognition of doing so*

(Richard Stiggins, Assessment Crisis: The Absence of Assessment FOR Learning, Phi Delta Kappan, Vol. 83, No. 10, June 2002.)

FINDING #5

Technology support is a necessary component of an effective assessment and evaluation system. A well-designed and well-functioning information management and communication system enables the efficient management and use of assessment information to support student learning.

In its literature review, the Study Team found important implications regarding the effective use of assessment and evaluation information. The effective gathering of valid and reliable comprehensive information was identified as an important function of an assessment and evaluation system. However, gathering the information was seen as only the first step. Assessment information only becomes useful when it is maintained in an organized manner that is readily accessible to support instructional decision-making. This requires sharing of information across multiple databases with links to instructional resources.

“As technology advances and teachers become more proficient in the use of technology, there will be increased opportunities for teachers and administrators to use computer-based techniques, Internet resources, and more complex, detailed ways of reporting results. Understanding how general, fundamental assessment principles and ideas can be used to enhance student learning and teacher effectiveness will be achieved as teachers and administrators learn about conceptual and technical assessment concepts, methods and procedures and apply these fundamentals to instruction.” (James McMillan, ERIC Digest, Basic Assessment Concepts for Teachers and School Administrators, ED and technical assessment concepts, methods and procedures and apply these fundamentals to instruction.” (James McMillan, ERIC Digest, Basic Assessment Concepts for Teachers and School Administrators, ED447201, 2000-11-00.)

Technology systems are capable of performing these kinds of tasks with ease and efficiency. A well-designed information warehouse system can maintain, organize, and sort a myriad of information that is useful for monitoring student progress, and evaluating program and system effectiveness.

Technology systems can efficiently score a variety of assessment tasks and make results readily available for instructional planning and “real time” learning interventions. They can provide instructional and curricular resources that expand intervention options and enrich learning.

The communication capabilities of a well-designed technology support system makes possible the efficient sharing of information across distance. This informs all who are affected by the data and enables immediate access to relevant information and collegial decision-making. In partnership with an efficient, well-designed technology support system, teachers, students, parents, and others are equipped to make meaningful and immediate decisions that enhance learning for individual students.

“Information technologies are helping to remove some of the constraints that have limited assessment practice in the past. Assessment tasks no longer need to be confined to paper and pencil formats, and the entire burden of classroom assessment no longer need fall on the teacher.”
(p. 287)

“Various technologies have been applied to bring greater efficiency, timeliness, and sophistication to multiple aspects of assessment design and implementation. Examples include technologies that generate items, immediately adapt items on the basis of the examinee’s performance, analyze, score and report assessment data, allow learners to be assessed at different times and in distant locations, enliven assessment tasks with multimedia, and add interactivity to assessment tasks, ... technology makes it possible to score and interpret multiple aspects of student performance on a wide range of tasks carefully chosen for their cognitive features, and to compare the resulting performance data against profiles that have interpretive value.” (National Research Council, *Knowing What Students Know: The Science and Design of Educational Assessment*, National Academy Press, 2001.)

The Poway Unified School District’s Educational Technology Department is in the process of building a technology support system such as was described as necessary in the literature review.

PUSD Educational Technology Information Services (ETIS) is currently building Data and Protocol foundations for PUSD data warehouse and technology support network to enable PUSD technology system to interface with each other.

The primary purpose of this data warehouse is to enable access to technology tools and electronically available information to support student learning with the following features:

- *Real time availability of information to all users*
- *Fluid technology interface with curriculum standards, student progress information, and learning and assessment activities*
- *Reduction in duplication of actions*
- *Access to student specific information to parents and students*

Identified enabling criteria:

- *Work location access to technology tools and specific stored information related to individual job responsibilities*
- *Twenty-four/seven access to responsibility specific stored information and technology systems*
- *Professional development opportunities to extend understanding related to the use of technology tools and the interpretation of technology stored information*
- *Opportunities for professional collaboration, information sharing, information analysis, and application of the results to support student learning*

(Study Team notes from meeting with Poway Unified School District's Educational Technology Department staff members: Tracy Jones; Charlie Garten; and Stacy Campo, December 5, 2002

FINDING #6

Clearly articulated Assessment Policy and Procedures are a necessary component of an effective comprehensive, coherent and continuous assessment and evaluation system. The Poway Unified School District does not currently have clearly articulated Assessment Policy and Procedures.

The Study Team reviewed the literature on educational assessment and evaluation and discovered universal support for the necessity of clearly articulated policy and procedures related to the use of student and program assessment and evaluation measures. Assessment systems that are not founded upon clearly articulated policies nor guided by well-defined procedures have very little likelihood of positively influencing student learning.

“Clearly written purposes, criteria and procedures outlined in public policy statements and guidelines increase the likelihood that:

- *Performance expectations for students will be understood*
- *A uniform standard of judgment will be applied*
- *Evaluations will be fair*

- *Evaluation results will be trusted and used”*

(Joint Committee on Standards or Educational Evaluation, The Student Evaluation Standards: How to Improve Evaluations of Students, Arlen Gullickson, Chair, Corwin Press, 2003.)

The California Assessment Collaborative, a partnership of the Assessment Curriculum and Evaluation (ACE) Consortium, the Greater San Diego Area Consortium, and Far West Laboratory, engaged in a three-year effort to systematically identify, validate, and disseminate alternatives to standardized testing throughout the state of California. Their early work, described in Charting the Course Toward Instructionally Sound Assessment, identified five key dimensions of instructionally sound assessment. These included: articulating content standards; developing meaningful, fair assessments; building teacher capacity to use assessment to improve learning; building student capacity to use assessment to improve learning; and determining and monitoring the consequences of assessment. Their work and the study of 22 pilot projects support the need for clearly defined and articulated public systems of “interdependent dimensions.”

“The development and implementation of instructionally sound assessments must be understood as a complex, systemic process. Work in CAC projects suggests that in order to assure that performance assessments improve teaching and learning, assessment development must go beyond the articulation of standards and invention of tasks and scoring procedures. It must be seen as the challenge of developing a system of interdependent dimensions.” (California Assessment Collaborative, Charting the Course Toward Instructionally Sound Assessment, San Francisco, 1993, p.116)

The Poway Unified School District’s Strategic Plan of 2002 called for development of a *Comprehensive Assessment Plan* aligned to established academic standards and core values. This plan would include a collection of measures, used consistently over time, to provide meaningful insights regarding the effectiveness of PUSD programs, policies, and practices. It would provide for the collection and analysis of information regarding:

- Student performance related to specific academic standards.
- Demographics to support an understanding of the impact the PUSD system has on all the members it serves.
- Attitudes and perceptions to inform thinking and support understanding about how students, teachers, and parents feel about their educational experiences.
- Programs and processes to determine their effects on student learning.

The Study Team believed this initiative would increase the effectiveness of assessment within the District. Its inclusion in the PUSD Strategic Plan underscores the importance attached to a clearly articulated assessment and evaluation system. A review of the document and a study of the Guiding Principles contained within it verified alignment

with research-based theory. With minor changes to the wording of the Guiding Principles, the Study Team endorses the PUSD Assessment Design Proposal but recommended a review of current practice as a beginning step towards the development and implementation of a comprehensive, coherent, and continuous assessment and evaluation system.

A Review of Current PUSD Policies and Procedures:

“A system of individual assessment must be in place through January of 2005 that has a primary purpose of assisting pupils, their parents and teachers in identifying individual academic strengths and weaknesses in order to improve teaching and learning. District must provide ongoing assessments designed to provide information to students, parents and teachers.” (California Education Code 60602)

The K-5 Assessment Study Team reviewed current PUSD policies and procedures related to assessment and evaluation and found them to be inadequate and lacking coherence. The Team found eight that directly address the selection, use, or consequence of assessments. There was no comprehensive, coherent, and continuous framework apparent. The PUSD policies and procedures identified are:

- 3.3.4 *Physical Performance Testing (1997)**
- 3.6.1 *High School Graduation Requirements (1995)**
- 3.5.1 *Promotion/Intervention/Acceleration/Retention (2000)**
- 3.23 *Assessment and Attainment of Adopted Proficiencies (1996)*
- 3.27.5 *Redesignation of Students of Limited English Proficiency (1996)**
- 3.27.11 *Evaluation Criteria for Consolidated Programs (1996)*
- 3.30.1 *Adoption of Selected Standardized Tests (1991)*
- 5.10 *Assessment and Guidance (1991)**

Poway Unified School District Board Policy, Article 3, Educational Program and Article 5, Student Personnel

Five of the District’s current assessment policies, (identified with an asterisk in the chart), address federal or state accountability and/or compliance issues. These assure that the District’s operational procedures comply with state/federal laws. A review of the literature indicates that assessment policies developed solely for accountability reasons do not improve student learning.

“Assessment strategies that are driven by accountability aims often do little to improve

teaching and learning.” (Lorna M. Earl and LeMahieu, Rethinking Assessment and Accountability”, Rethinking Educational Change with Heart and Mind, 1997, p.149.)

One of the remaining three PUSD board policies, 3.23 – “Assessment and Attainment of Adopted Proficiencies” (1996), is out-of-date relative to state graduation requirements based on the California High School Exit Exam.

Another, 3.30 – “Adoption of Selected Standardized Tests” (1991), stipulates, “Appropriate professional criteria will be followed in the design and preparation of test materials,” and defines procedures for the adoption of standardized tests to be used District wide. The Study Team found this policy to be in alignment with research and its own recommendations.

A review of the “Poway Unified School District Assessment Plan: A Design Proposal”, created in the Fall of 2002, indicated local awareness of the need for a system to coordinate the design and use of assessment and evaluation to support the District’s primary purpose; student learning. The document proposed guiding principles for assessment and made recommendations for the development and implementation of a comprehensive, coherent, and continuous assessment and evaluation system. The Study Team found the proposed guidelines to be consistent with its review of literature on assessment.

Guiding Principles of Assessment (PUSD District Assessment Plan Design Proposal)

- I. The essential purpose of assessment is the improvement of student learning.*
- II. Assessment must provide a comprehensive picture of student achievement.*
- III. Assessment must measure student growth over time.*
- IV. Assessment must be valid and reliable.*
- V. Assessment data must be responsibly and efficiently collected and managed.*

Poway Unified School District Strategic Plan. (2002). “ Design Proposal District Assessment Plan”

Appendix A

GUIDING PRINCIPLES

The guiding principles listed below provide the basis for the Poway Unified School District's policies and practices regarding assessment and evaluation. These guiding principles provide a focus for decision making around assessment instruments, practices, and the use of results.

GUIDING PRINCIPLE #1

The essential purpose of assessment is the improvement of student learning.

The primary purpose of assessment is to inform and influence the work of teachers, students, parents and the community. The District places a premium on information that informs the day-to-day decisions of students, teachers and parents and lead to improved student learning. "All Students Learning" is achieved when teachers gather and respond appropriately to dependable information about student learning, day-to-day, week-to-week, and year-to-year. The assessments we use are tools to help create a complete picture of performance and achievement for each student.

Corollaries: If the essential purpose of assessment is the *improvement of student learning*, then it must be...

- Aligned to standards
- Meaningful to students, teachers and parents
- Fair
- Timely

GUIDING PRINCIPLE #2

Assessment must provide a comprehensive picture of student achievement

A *Comprehensive Assessment Plan* must employ a variety of assessments and assessment strategies to provide evidence of student growth and achievement over time.

Corollaries: If assessments are to provide a *comprehensive* picture of student achievement, then they must...

- Provide students multiple opportunities
- Employ multiple formats
- Assess standards
- Employ multiple types

GUIDING PRINCIPLE #3

Assessment must measure student growth over time

By focusing on student growth and gain over time, we can measure and report the impact of curriculum and instruction on student performance regardless of individual differences in starting points or levels of prior knowledge. A basic component of our evaluation system is the educational “value added” to individuals and student groups over time.

Corollaries: If assessments are to measure student *growth over time*, they must be...

- Consistent
- Constant
- Incremental
- Aligned to standards
- Reportable on a common scale

GUIDING PRINCIPLE #4

Assessment must be valid and reliable

Assessments are useful only when they yield quality information. Teachers require valid and reliable district assessments against which they can compare the results of classroom assessments. Therefore, standards of quality must guide the selection of tests, scoring guides and the development of standardized District assessments. Alignment of district, site, and classroom assessments with local academic standards is necessary to maximize student learning.

Corollaries: If assessments are to be valid and reliable, they must...

- Provide replicable results
- Address the academic standards
- Be administered appropriately
- Be validated over many administrations
- Be culturally unbiased

GUIDING PRINCIPLE #5

Assessment data must be responsibly and efficiently collected and managed

We are committed to the ethical management, storage and use of data. Data collected concerning individual students, the community, and our schools and programs must only be used to advance our mission of “All Students Learning”.

Corollaries: If assessment data are to be responsibly and efficiently managed, they must...

- Be responded to (not ignored)
- Be shared confidentially.
- Have clearly defined purposes that are communicated in advance.
- Be integrated into classroom instruction

(Poway Unified School District, Design Proposal District Assessment Plan, 11/27/00 Revision, Poway, 2000, pp. 4-6.)

Appendix B

ASSESSMENT GLOSSARY

The following information is provided to help clarify the purposes, and limitations of various kinds of assessments used in PUSD and the terms associated with them

I. Kinds of Tests We Use

A. Norm Referenced Test (NRT) *SAT-9*

Purpose: This is standardized (normed) by a reference group that describes average performance. These tests compare students using carefully selected items spread across several grade levels in order to differentiate “low” “average” and “high” performers. The test is designed so that 54% of the norming group falls in the “average” range, 23% in the “above average” range and 23% in the “below average” range; contrasted with criterion referenced tests.

Usefulness: Norm referenced tests are useful for . . .

- 1) Comparing groups of students across the nation.
- 2) Tracking group performance over time.
- 3) Identifying relative strengths/weaknesses of groups and individuals.

Limitations:

- 1) Relatively few items are used over a wide range of skills lowering the validity.
- 2) Test items reflect a general, national curriculum and may not reflect specific elements of a local curriculum. (validity)
- 3) Items systematically avoid portions of the curriculum which are mastered by most students. (validity)
- 4) These tests are biased toward economically more advantaged students. (Validity)
- 5) Not a reliable indicator of an individual’s absolute academic performance. Useful for relative performance levels.
- 6) Slow feedback to teacher/student/parent limits its usefulness. Usually scored out of district.

B. Criterion Referenced Tests (CRT) *Quality Math and parts of CSR*

Purpose: A measure of achievement of specific knowledge/skills in terms of absolute mastery. The focus of a CRT is on performance of an individual as measured against a standard rather than against the

performance of others who take the same test; contrasted with the norm referenced test. Often used as unit/pre/post-tests.

- Usefulness: Criterion referenced tests are useful for . . .
- 1) A reliable measure of individual student attainment (mastery) of a specific curriculum.
 - 2) Evaluating programs within a district, a school or in a classroom.
 - 3) Measuring short-term progress such as chapter/unit/proficiency tests.
 - 4) Providing students and teachers feedback to student progress
 - 5) Can be teacher made.
 - 6) Closely related to the curriculum being taught.

- Limitations:
- 1) Generates no national comparisons.
 - 2) Must be aligned with local curriculum to be effective.
 - 3) Narrow curriculum focus

C. Diagnostic Tests *Running Record and K-3 Reading Assessment*

Purpose: Intensive, in-depth evaluations. The purpose of this kind of test is to determine student knowledge/skills and use the information to design instructional plans to address the diagnosed needs of individual students.

- Usefulness: Diagnostic tests are useful for . . .
- 1) Planning instruction for individual students.
 - 2) Creating groupings and class profiles.
 - 3) Defining the work of the teacher.
 - 4) Provide specific feedback to students

- Limitations:
- 1) Often administered one-on-one
 - 2) Usually require a professional teacher intimately familiar with the subject.
 - 3) Requires analysis by the teacher. Not easily scored
 - 4) Sometimes lengthy to administer.

D. Performance-Based Assessments *Quality Writing, IRI's, parts of Quality Math*

Purpose: Performance based assessments require the production of a product or completion of a task that reflects the essence of the discipline being assessed. This kind of assessment assesses content and process objectives, simultaneously. Typically performance-based assessments reflect desired instructional strategies. Performance-based assessments can be criterion referenced and diagnostic.

- Usefulness: Performance-based assessments are useful for . . .
- 1) Assessing process and content.
 - 2) Assessing higher-order thinking.
 - 3) Promoting selected instructional strategies.
 - 4) Assessing within the context of the discipline; i.e. authentic assessment.
 - 5) Define desired instructional practices.

- Limitations:
- 1) Requires separate content and process evaluation criteria (performance rubrics).
 - 2) Can be complex to administer and score
 - 3) Include some subjectivity.
 - 4) Requires professional teacher to observe/assess/score.

E. Informal Tests/Quizzes

Purpose: Non-standard assessment instruments that are designed to give an approximate index of student knowledge/skills; often teacher-made.

- Usefulness: Informal tests/quizzes are useful for . . .
- 1) Informal, quick and easy administration.
 - 2) Providing teachers/students immediate feedback.
 - 3) Measuring progress against a performance standard.

- Limitations:
- 1) Can be carelessly constructed.
 - 2) Are sometimes misused. Informal tests/quizzes are formative in nature. Misused when compiled to calculate grades.

II. GLOSSARY OF TERMS

Achievement Test	An objective exam that measures educationally relevant skills or knowledge about such subjects as reading, spelling or math.
Average	a statistic that indicates central tendency or the most typical score of a group of scores. Most often the average refers to the sum of the scores divided by the number of scores in the set.
Battery:	A group of tests which are of value individually, in combination or totally; generally composed of “sub tests”.
Ceiling	The upper limit of ability that can be measured by a test.
Criterion-referenced test	A measurement of achievement against specific criteria in terms of absolute mastery. The focus is on performance of the individual as measured against a standard or criterion rather than the performance of others who take the same test; see norm-referenced.
Data:	Factual information used as a basis for discussion, calculation and reasoning.
Diagnostic test	An intense, in-depth evaluation with a narrow focus in specific subject area . The purpose of this type of test is to determine the specific learning needs of individual students.
Informal test	A non-standardized test that is designed to give approximate index of an individual’s level of ability or understanding; often teacher-constructed.
Information:	Data that has been processed. Answers and/or questions raised.
Item	An individual question or exercise in a test.
National Percentile Rank: NPR	A scale of unequal intervals that indicates performance in relation to the performance of others who take the test nationwide (the norming group). An NPR of 72 indicates that the student answered more items correctly than 72% of the students at the same grade nationwide. Because of unequal intervals, movement from one rank to the next becomes more difficult as you move away from the mean (50). Can be difficult to interpret changes over time.
Normal Curve Equivalent	Standard scores with a mean of 50 and a standard deviation of approximately 21. Used to calculate changes over time.
Norm-referenced test	An objective test that is standardized on a group of individuals whose performance is evaluated in relation to the performance of other individuals; contrast with criterion-referenced test.
Norm-referenced test	
Norms	Performance standards that are established by a reference group and that are used to describe “typical” performance.

P-value:	Percent correct.
Percentile	The percent of people in the norming sample whose scores were below a given score.
Quartile:	In a normal curve distribution, Quartile 1 contains the bottom 25% of the population, Quartiles 2 represents the mean (50%), and Quartile 4 contain the upper 25%. Referred to as “Q ₁ ”, “Q ₂ ”, etc.
Raw Score:	The number of items answered correctly.
Reliability	The extent of which a test is dependable, stable and consistent with administered to the same individuals on different occasions. Technically, this is a statistical term that defines the extent to which errors of measurement are absent from an instrument.
Stanine:	One of nine equal steps where 1 is low and 9 is high.
Normal Curve Equivalent: NCE	A transformation of original tests into a scale of equal intervals from 1-99. Used by statisticians to make comparisons across tests. Useful to show growth relative to the norm group over time. NCE's are called for in Blue Ribbon Applications.
Scale Score:	Score used to measure absolute growth from one year to another. The scale is applicable from one year to the next for Total Reading, Total Math, etc, but not for subtests. The scale on the SAT-9 is 1-999. Raw scores are converted into scale scores which are converted into NPR/NCE/stanine.
Standardized test	a form of measurement that has been normed against a specific population (see norm referenced). Standardization is obtained by administering the test to a given group under the exact conditions that it was administered to the norm group. Equivalent scores are then produced for comparisons of an individual score to the norm group's performance.
Validity	The extent to which a test measures what is it intended to measure. Validity is the degree of accuracy of predictions or inferences that can be made from a test score.

Appendix C

Poway Unified School District Technology Support System

PUSD Learning Support Services (LSS) and Educational Technology Information Services (ETIS) are currently building a Data Management foundation for a PUSD data warehouse and technology support network that will allow PUSD information from various data base systems to interface with each other.

The Primary purpose of this data warehouse is to enable access to analysis tools and student information to support student learning. It includes the following features:

- Real time availability of information to all users
- Fluid technology interface with curriculum standards, student progress information, and learning and assessment activities
- Reduction in duplication of actions
- Controlled access to information based upon the identified need of each user.

Identified enabling criteria include:

- Work location access to technology tools and specific stored information related to individual job responsibilities
- Around-the-clock access to historical information and analysis tools tailored to the specific responsibilities of each user
- Professional development opportunities to extend understanding related to the use of analysis tools and the interpretation of data stored in the system
- Opportunities for professional collaboration, information sharing, information analysis, and application of the results to support student learning

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