

Educational Perspectives

Journal of the College of Education/University of Hawai'i at Mānoa

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Published twice each year by the College of Education, University of Hawai'i at Mānoa.

Subscription Rate: \$10 per year; individual copies \$5.

Address all communications regarding single copies, subscriptions, manuscripts and correspondence about editorial material to Editor, *Educational Perspectives*, College of Education, University of Hawai'i at Mānoa, Wist Annex 2 Room 131, 1776 University Avenue, Honolulu HI 96822.

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This publication is available in microform from Bell & Howell, 300 N Zeeb Road, Ann Arbor, Michigan 48106.

International Standard Serial Number (ISSN) 0013-1849.

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Implementing Educational Standards
Volume 34 ■ Number 1, 2001

STANDARDS FOR TEACHER EDUCATION

RANDY HITZ

In this issue of *Educational Perspectives*, the contributors explore the theme of standards in education with particular reference to standards for K-12 students and standards for teachers. I'd like to use this space, however, to describe related developments in establishing and maintaining standards in programs of teacher education.

Although states have had teacher education standards for many years, it is only recently that they have begun to establish common sets of standards for all teachers. The standards of each state and the approval or accreditation processes were generally developed by the state education agency under the auspices of the state board of education. Program quality was a matter of periodic state review and accreditation—graduation from a state approved program being a condition of teacher licensure. These standards tended to vary from state to state, in spite of efforts by organizations such as the National Association of State Directors of Teacher Education and Certification (NASDTEC) to establish consistency.

The NASDTEC model, however, has not been the only option for states and colleges to follow. In the early 1950s, five education organizations* collaborated to develop an independent national accreditation system for teacher education programs and, in 1954, the National Council for the Accreditation of Teacher Education (NCATE) was formed (NCATE 1995).

Initially, NCATE standards were seen by many stakeholders to lack rigor and the process was considered by some to be cumbersome and unnecessarily expensive, but this changed markedly in 1987 with the establishment of new, more rigorous standards and improved procedures. As a result a large percentage of programs (over 30 percent in some years) failed to meet the standards. Thus, NCATE developed greater credibility both inside and outside the profession.

One clear indication of the wider acceptance of the NCATE standards and accreditation processes is the fact that 46 states now have partnership agreements with NCATE whereby NCATE and state accreditation visits are conducted collaboratively or jointly. In some cases, such as in Hawai'i, the state accepts NCATE accreditation in lieu of its own accreditation.

**Organizations involved in creating NCATE include: the American Association of Colleges for Teacher Education, the National Association of State Directors of Teacher Education and Certification, the National Commission on Teacher Education and Professional Standards of the National Education Association, the National Council of Chief State School Officers, and the National School Boards Association.*

Evidence supports a growing acceptance of NCATE among states and colleges. Three states, Arkansas, North Carolina and West Virginia, require all teacher education programs to be NCATE accredited. In 1996, the influential report of the National Commission on Teaching and America's Future recommended that all teacher education programs be NCATE accredited. The popularity of NCATE by the teacher education community can be measured by the fact that the number of candidates for NCATE accreditation has nearly tripled in the last five years.

In 2001, after many years of following the NASDTEC model, the College of Education (COE) obtained NCATE accreditation for the first time. The faculty of the COE officially decided in 1998 to pursue NCATE accreditation for several reasons. The standards are consensus standards created by the profession. The process provides a useful mechanism and structure for self-assessment and for peer review. Such accreditation improves the College's status in the state and nation and improves the value of the degrees the College awards. The College will undoubtedly benefit. But even if the College does not benefit directly from the process, the participation of the University of Hawai'i and every other teacher education institution in the nation will serve to improve the quality of education.

What makes the NCATE process useful to the College of Education? In addition to the reasons stated above, NCATE accreditation would essentially replace the State Accreditation of Teacher Education process, thus giving the COE greater autonomy and changing the relationship between the COE and the one school district of Hawai'i to one of partnership rather than one of oversight.

The NCATE self-study process was extremely helpful. As most faculty anticipated, several areas were identified as needing improvement. For example, the teacher education curriculum and program offerings needed to be changed to ensure that all teacher education students met the standards in technology, special education and multicultural education. Though all of these elements had been in place in the curriculum, not all students had been required to take the courses that included such content. In addition, the administrative functions of the COE were clarified and streamlined. For example, a policies manual of the COE was developed and placed on the College's website. A long-range plan was developed along with a process for ongoing review and revision of the plan. A clear and comprehensive program assessment system was also established.

But the most significant finding from the self-study was that the COE was actually doing a very good job. The College's programs met NCATE standards. The quality of students and faculty was rated as excellent. The wide

variety of programs offered to meet the needs of the State was exceptional and partnerships with the schools were very strong. All of these self-study findings were confirmed in the NCATE Board of Examiner visit in March, 2001.

Through the NCATE process, faculty developed a better understanding of the standards of the profession and how well they were meeting them. They learned a great deal about themselves and gained a better appreciation of their strengths as well as weaknesses. The process required faculty to take more time to talk with one another and with constituents about quality teacher education and to learn from one another. The process also enabled faculty to communicate more effectively with students, partner schools, policy makers and the community at large about the College's programs, vision and goals.

Why is NCATE accreditation important? One of the great strengths of NCATE is the way it facilitates cooperation among the diverse constituents of the profession and draws on their resources to form consensus standards. This effort to build consensus standards by, and for, the profession stands in stark contrast to the approach of the Teacher Education Accreditation Council, an alternative accreditation agency that allows each applicant institution to determine its own standards.

NCATE membership includes public and student representatives and representatives of teacher education institutions, teachers, policy makers, administrators and specialists, as well as subject-specific associations, child-centered organizations, and technology groups. NCATE is a coalition of 33 constituent members of professional and public policy organizations directly involved in the quality of teacher education programs. Among the members are the two national teacher education associations, two teacher unions, three policymaker organizations, and specialized professional associations (SPAs). The SPAs develop standards for program approval in their respective content areas. For example, the National Council for Teachers of Mathematics has standards for mathematics education programs. All SPA standards must be approved by NCATE.

NCATE has continued to evolve and improve. In 2000, it adopted a new set of performance standards. These improvements were "a direct response to policymaker concerns and a natural outgrowth of the standards movement of the 1980s and 1990s. The system requires change of all involved—institutions, the states, teachers, teacher candidates, and NCATE itself" (NCATE, 2001).

One of the hallmarks of the major professions is that individuals cannot become members of the profession until they have completed a nationally accredited preparation program at a university. Professions are defined by their

unique knowledge base and by consensus standards for conduct. It stands to reason then that professions would require individuals to complete preparation programs that teach these foundations of the profession.

In the teaching profession we now have a respectable knowledge base supported by research and professional practice. Individuals should be expected to possess the knowledge, skills, and dispositions reflected by the knowledge base and teacher preparation programs should be expected to teach the knowledge, skills and dispositions.

Teaching is still evolving as a profession. Creating a set of standards and an accreditation process for preparation programs is an essential part of that evolution. Those who view NCATE standards as irrelevant or wrong-headed fail to understand the nature of NCATE and how those standards are developed. They also fail to acknowledge the important role that accreditation plays in building a profession.

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WALKING THE TALK OF STANDARDS-BASED REFORM: REFLECTIONS ON THEORY AND ACTION

PAUL G LEMAHIEU

In the early 1990's many states and districts were prompted to adapt or adopt their own versions of student standards. In the early stages, jurisdictions promulgated standards for students coupled with the development and use of appropriate assessments as the primary hallmarks of the implementation of standards-based reform. As defining and powerful as these actions may be, however, student standards and the means to measure their achievement cannot—simply on their own—effect changes from decades-old practices, longstanding policies, and institutionalized programs, which evolved from past beliefs about who can learn and how best to teach them. Remember the bell curve?

To nurture the success of standards-based reform, we must be willing to examine all of the system's elements, test their relevance in support of standards, and retrofit or replace where necessary. In "Standards at the Base of School Reform" (Le Mahieu & Foss, *The School Administrator*: May 1994:16-22), this scrutiny rendered seven assumptions or postulates about the enabling conditions and actions necessary for the success of a genuinely systemic reform effort.

These seven postulates illuminate the breadth and depth of the changes needed for standards-based reform. We must address motivational structures, instructional guidance structures, policy environments and governance structures, budgetary and resource allocation, capacities of professionals, as well as the development of a reflective capacity within the system.

"Standards at the Base of School Reform" reflected the research-based perspective of a university academician, someone whom practitioners often refer to as residing in an "ivy tower." As Hawai'i State Schools Superintendent for nearly three years, I have had the opportunity to engage in a reality check of those seven postulates by "walking the talk." What follows is a reflection upon research and theory applied to practice.

STUDENT PRIORITIES

#1: Standards-based reform requires that considerations of what students should know and be able and disposed to do should be placed at the center of the reform efforts.

It is unlikely that any reform will succeed at improving the performance of students if it does not concern itself, first and foremost, with the system's aspirations for students. Standards-based reform insists that change begins by

articulating those aspirations, proceeds to considerations of the educational experiences necessary to realize them, and concludes with the redefinition of structures to enable those experiences.

Throughout this process, change is organic—student priorities direct the educational experiences that we desire for our schoolchildren, and these experiences, in turn, shape structures as finance, governance, and organization and use of time needed to realize those experiences.

WALKING THE TALK

Since 1994, Hawai'i has had student standards. Standards deemed of such importance that they were enacted into State statute. However, the first Hawai'i Content and Performance Standards document was merely distributed to classrooms and schools were charged to implement them. Five years later, a standards review commission found that there was no systematic implementation plan for student standards, a statewide assessment system was lacking, parents and community members had not been informed about the student standards, and there was "no overarching vision of performance standards as the central driving force to improve student learning." (Department of Education, State of Hawai'i, Final Report Hawaii State Performance Standards Review Commission on Performance Standards, January 1999: 2)

In short, the standards—nearly all 1,544 of them—were literally content standards and teachers felt overwhelmed by this extensive number, as well as by the lack of direction, professional preparation or institutional support. The vast majority of educators simply placed the standards "on the shelf," rather than "at the center" of their professional priorities and pursuits.

One of our first actions was to acknowledge the shortcomings of the original set of student standards and revise and refine them to specify not only what students should know, but also what they should be able and disposed to do. To ensure successful implementation of the student standards and to quell any doubts about our seriousness of purpose in transforming into a standards-based system, we detailed our commitment in a strategic plan for standards-based reform. The strategic plan included the ideas and input of all stakeholder groups and as many individual stakeholders as we could manage—over 1,800 to date.

We now have sets of student standards in 10 subject areas—from the core content areas of English language arts,

science, mathematics, and social studies, to fine arts, health, physical education, educational technology, world languages, and career and life skills. The content and performance standards for these subject areas will have grade cluster benchmarks to guide students, teachers, and parents about students' development as they progress toward meeting the standards. These will be followed with other instructional supports, such as rubrics that define different levels of quality and achievement, student work or exemplars that model the standards, and professional commentary, which identifies the performance indicators in the student work with the requirements inherent in the standards.

In addition, a considerable investment in institutional resources, including technology, will assist teachers with adopting wisely, adapting appropriately, and using well curricular materials aligned to the standards.

This refinement process enabled educators and other stakeholders to seriously reflect on the goals of standards-based learning. Simply meeting standards is not the goal. What we desire for our students and eventually, what our students should desire for themselves is described in four General Learner Outcomes:

- Ability to be responsible for one's own learning,
- Ability to be involved in complex thinking and problem solving,
- Understanding that it is essential for human beings to work together, and
- Ability to recognize and produce quality performance and quality products.

These General Learner Outcomes, if realized, will enable learners to lead full, productive, and meaningful lives. For this, they are valuable and valued.

Thus the four General Learner Outcomes are treated as essential, overarching goals for all students in all grade levels and all academic disciplines. They pervade every content and every performance standard. Their integration must be woven into daily classroom instruction and assessment, and in all those other areas and activities that form a school's life and culture. While it is not always intuitively obvious how, it is not any less important to place standards at the center of these supporting functions—procurement, personnel, and facilities—that are seemingly distant from instruction. Simply put, if these functions are not reinvented to support standards implementation, the risk is very great that they will stand in the way.

Upon reflection, it seems to me now that placing standards at the center of all decisions, including those affecting policy, programs, and practices, is an even more powerful and even more necessary strategic lever than I had originally thought. It is essential in a large and complex organization

that every component part focus on one clearly defined and enduring set of goals. To do so is the only way to ensure that every organizational unit moves in the same direction toward and every decision is made with reference to that one set of concerns. Effective change can be achieved if everyone shares a coherent vision and engages in consistent action.

MOTIVATING FACTORS

#2: Standards-based reform makes public the goals, expectations, and aspirations for individuals and the system and provides a focus for their efforts that will improve the effectiveness of the system.

Motivational theory research tells us that motivation is strongest and most enduring when it focuses on the positive consequences of high performance and its intrinsic rewards.

Motivation and increasingly higher performance will depend on the fairness and adequacy of how we measure performance; of how we account for productivity. Until recently, this accounting concentrated on one type of outcome—statewide test scores—to the exclusion of many others. One outcome is not sufficiently comprehensive to present a fair picture of performance or the contexts and conditions that influence performance.

We must develop several forms of public accounting that are widely perceived as adequate, fair, and understandable to stakeholders—students, educators, parents, and the broader citizenry. The data should be configured to support discussion leading to the establishment of priorities, the articulation of response options, the guidance of choices and implementation of options, the evaluation of those choices, and eventual redirection as part of the continuous improvement cycle. Discussions among stakeholders must include not only the performance of the system, but also the conditions that it faces, and appropriate responses to identified needs.

Implicit in this postulate is the belief that the results of public accounting and related analyses will be used to inform efforts at ongoing improvement of the system and the various elements that comprise it. This suggests that the ultimate goal of such accounting should be to increase and enrich discussions about schooling—not to simplify and thereby reduce them.

Once standards-based public accounting is established, it becomes reasonable to tie the ensuing discussions to more summary judgements and action systems that move beyond accounting and into accountability. Accountability can then focus on things more appropriate and fair. Do those being judged see problems and issues clearly and honestly? Can they formulate adequate and appropriate responses? Do they follow through with those responses?

This basis for judgement represents much fairer accountability for professional educators and the system than does

the perennial and often thoughtless focus on whether numbers go up or down. It also is more challenging.

WALKING THE TALK

This has been one of the most challenging areas of our efforts to date. Assessment and accountability is where we say that our expectations for students and for ourselves are made real and taken seriously.

We began this task area with the development of an assessment system that is truly aligned with our standards. We started with a portion of a commercially available product—the SAT-9, which matches our standards best of all of them. Then we customized it with additional assessment tasks to bring it into alignment with the Hawai'i Content and Performance Standards. The result is a single examination that provides both nationally referenced data and standards-based information about students' accomplishment of our standards. The resulting assessment also has an expanded variety or range of assessment types.

This Hawai'i Assessment Program measures students' performance against our own content standards. Students will be determined to have exceeded the standards, met them, approached them, or fallen below them. This assessment system is scheduled for pilot testing this year and will be fully operational in the year ahead.

With an aligned system in hand, we are in a position to have a fair and honest accountability system. Bearing in mind motivational theory research, we have laid out a framework for a balanced system that emphasizes the range of accountability—from recognition and reward, to assistance when needed, to further action if and only if, upon receiving adequate assistance and ample time, goals still are not met.

Our commitment to a system of accountability is important to note here. We will not implement an instrument focused only on one group or constituency alone. Our system broadly includes student assessment, school accountability, professional accountability, student accountability, state and district accountability, and accountability of other constituents (e.g., elected officials, parents, business community).

For students, progress through the system will be predicated upon the demonstration of success in learning the standards at benchmark years. All can meet the standards; though some will require more time, more attention or

different instructional approaches. Each school will decide what's best for its students.

For educational professionals, we distinguish between collective and individual responsibilities. People should be held accountable for that which they can in fact be expected to accomplish. When it comes to student achievement, I think the record is clear: it takes an entire school—teachers, support professionals and other school staff to produce student learning. Therefore, we examine student achievement as an indicator of whole school performance. It is a simple extension of a truth learned in the private sector: where groups are required to produce the outcome, accountability should be required of the group; individuals should be held accountable only for those things that they can do as individuals.

HIGHER DEMANDS

#3: The articulation and widespread dissemination of standards will provide adequate guidance to ensure the transformation of teaching and learning.

The educational landscape is strewn with the disappointment of those who believed that dissemination of student standards alone would lead to desired changes in classroom practice. Hawai'i's experience with its Blue Book compendium of content standards attests to that fact. Practitioners have testified to its use more as a paperweight, than a bible containing the wisdom of what students should know and be able to do.

We have since learned that standards must be accompanied by illustrations of what they mean in terms of curricular expressions and instructional practices, as well as the contexts necessary to realize those practices. We must find compelling ways of expressing these exemplars so they bring the important ideas of the standards to life and can guide the practice of teachers and others.

A second lesson concerns those changes in curricular and instructional practice that were once thought of as automatic and intuitive, given the standards. In real life we have found them to be new behaviors and extraordinarily difficult to realize. They are neither intuitively obvious nor common in the experience and training of teachers currently in service. Professionals need to experience the forms of teaching and learning that are desired; they also need extended opportunities to practice these new behaviors in a protected environ-

What is ultimately desired is a professional teaching corps that can choose wisely, adapt appropriately, and invent when necessary similar practices tailored to their students. The point must be to free teachers to create wisely—not to be constrained by a new form of standardization.

ment. They are neither intuitively obvious nor common in the experience and training of teachers currently in service. Professionals need to experience the forms of teaching and learning that are desired; they also need extended opportunities to practice these new behaviors in a protected environ-

ment where they can take risks and refine their skills.

What is needed is the development of exemplars of the desired practices and enabling contexts. These exemplary illustrations should be tied to the standards and include the specifics of appropriate curriculum, teaching, learning events, and assessment, as well as the necessary conditions of school structure.

These exemplars need to be used strategically within a program of professional development. They can serve as objects of study for educators. The trick, however, is to ensure that the exemplars are not construed as script, much less scripture. What is ultimately desired is a professional teaching corps that can choose wisely, adapt appropriately, and invent when necessary similar practices tailored to their students. The point must be to free teachers to create wisely—not to be constrained by a new form of standardization.

From a curricular perspective, it is important to bear in mind that most sets of standards are not framed to represent a thoughtful, cogent, instructional sequence or to define all of the learning events essential to their realization. Most are broadly construed end points widely distributed across the instructional continuum. There remains a translational activity, as educational professionals examine these terminal outcomes with a concern for all of the enabling activities as well as an instructionally meaningful scope and sequence for them.

A powerful educational experience demands more than mere imitation of the standards or relevant exemplars. It must include a well-planned educational sequence leading to the desired results.

Research in cognitive development and appropriate teaching provides evidence that learning involves a process in which students construct an understanding of concepts in a variety of rich contexts. They imply a dramatic transformation of much of instructional practice currently in use. This transformation relies heavily upon adequate support in terms of professional development and enabling structures such as the organization of classrooms and schools, and use of time and personnel.

WALKING THE TALK

Beyond the refinement of the standards themselves, there is a need to provide support to educational professionals in a number of ways. Primary among them is access to and use of high quality curricular and instructional materials that are both current and aligned with our standards. To achieve this, we are utilizing technology, particularly the internet, as the medium providing access and immediate response.

At the beginning of the year, the Hawai'i Learning Interchange entered into a partnership with Apple Computer to provide curricular units and other materials

catalogued to the Hawai'i's own Content and Performance Standards. Teachers, parents, and others can log on and specify the specific standards that they want to address and the grade level of their students. At this website, they would get access to standards-related materials that range from local and national teacher-made materials, to materials that are commercially prepared and marketed (ali05.info.apple.com/hawaii/).

The DOE's standards website also offers the professional community of teachers a discussion board to post comments, ask questions, and offer suggestions relating to their classroom instruction or students' needs (doe.k12.hi.us/standards/). This technology-based support system enables teachers' exchange of professional commentary—advising each other on the quality and appropriateness of various curriculum choices—in a timely fashion. All this is designed to place our professionals in the role of “sophisticated consumers” of curriculum and instructional resources. “Sophisticated” in the sense of being able to choose wisely, adapt appropriately, and use well high-quality texts and curriculum; but “consumers” in the sense that they are supported by the system, and not asked to invent all that the education enterprise requires school by school, classroom by classroom, teacher by teacher.

The standards website offers those interested in learning more about assessment of the standards online access to the Assessment Information Resource Center. Still in its incubator stage, this center currently houses sample assessment items in mathematics. In another year, this web-based resource will be more fully integrated with curriculum and instructional materials, providing assessment tools for use on demand by teachers. Such tools would include sample assessment tools, a more comprehensive database of exemplary assessment items and tasks, advice on assessment techniques, and assessment resources available from vendors.

REWARDING EFFORT

#4: Standards-based reform will re-couple effort and accomplishment.

The schooling experience has come to be based on accumulated seat time, as opposed to contingent upon demonstrated accomplishment. Students spent an arbitrary amount of hours in a school day, an arbitrary number of days in a school year, and an arbitrary number of years attending school before graduating and receiving a diploma or certificate. This created a motivational structure that communicated to students the importance of attending school and playing the game, rather than engaging in genuine learning that results in demonstrated accomplishment. Similarly, many of the reward structures militate

against effort by adults in the system as well. For example, mechanisms for resource allocation rarely reward effort or accomplishment.

This emphasis on seat time as opposed to accomplishment has systematically de-coupled effort and accomplishment. Students do not succeed in this system through effort and achievement; rather, “serving time” is what comes to matter. Because of this, student effort is devalued and they are powerfully motivated to under perform or perform to a minimal level.

Merely stipulating standards does not reconstruct the system and automatically establish the links between effort and accomplishment for all students and adults, and motivate the kind of effort necessary to achieve high levels of performance. Mechanisms and options that promote performance as measured by the standards must be established.

WALKING THE TALK

Conceptually, standards offer the opportunity for us to become a performance-oriented system in which accomplishment is the point of it all; accomplishment that is recognized, respected and rewarded. By forming clear and consistent targets, we have the opportunity to align all parts of the system—its policies, programs and classroom practices, its curricular support as well as facilities and business services. All of the decisions made in all of our various offices will be made with the idea of supporting schools’ and teachers’ efforts to have student accomplish the standards. As a result, all of those decisions will begin to make a good deal more sense.

Our Strategic Plan for Standards-based Reform is our primary tool to align all parts of the system to hit the target—our student standards. The Strategic Plan is both our testament and evidence that we are serious about the Hawai’i Content and Performance Standards.

This Strategic Plan is founded upon information and input from 4,000 individuals throughout the State, who voiced their ideas, concerns, and opinions in interviews, focus groups, and surveys. Their input, together with routinely gathered data and volumes of research studies, form a comprehensive needs assessment that informed us of what needed to be done to make the system more efficient, more effective, and more likely to successfully help students meet standards.

The Strategic Plan covers five major areas:

- 1 Standards implementation and curricular, instructional and assessment support,
- 2 Assessment and accountability,
- 3 Comprehensive student support,
- 4 School governance and organizational development, and
- 5 Modernization of administrative support to schools.

Although the plan is strategic in nature, it describes 127 action items or tasks, which specify varying degrees of system support for the standards. Moreover, any notion of seriousness of purpose about the standards dictated that the plan’s actions to truly reform the system required a regular and rigorous maintenance schedule. To that end, those most directly responsible for the action items meet with me and the Deputy Superintendent every month, to review whether

...those most intimately familiar with the needs of each student (as well as the strengths of those working with each) should take greater authority and responsibility for defining the curriculum and instruction that each student encounters.

the standards-related tasks are being completed as envisioned and according to the deadline; and if not, what interventions are needed. This vigilance has paid off. In the 18 months since the plan was unveiled, we have completed or made significant progress on 83 out of 91 actions that were scheduled for completion by early 2001. In all, the plan to

align all the elements of the system in support of students meeting the standards is over 50% complete in a year and a half.

The risk of being distracted by real-world events and daily exigencies is a constantly looming threat. To keep focused on what truly matters takes considerable resolve and effort, but it is absolutely essential to do so.

REFORMING GOVERNANCE

#5: Standards-based reform permits an appropriate balance in who defines the educational experiences of students.

This postulate argues for the restructuring of the governance and decision-making contexts of education, particularly in regard to instructional matters.

This postulate requires the support of efforts at site-based management and shared decision making and opens up the issues of governance and structure. It suggests that those most intimately familiar with the needs of each student (as well as the strengths of those working with each) should take greater authority and responsibility for defining the curriculum and instruction that each student encounters. To do so speaks not only to the structures that enable and support these forms of authority but also to the capacity of

each professional to choose, adapt, or invent the educational experiences offered to each student.

This postulate also suggests necessary alterations in the policy environment within which instruction is defined and delivered. One of the greatest challenges to a powerful and efficient educational system is the temptation for all parties to overstep the proper definition of their roles and dictate practice at the school and classroom levels. This leads to what practitioners refer to as micro-management.

Each and every citizen and constituent has a necessary contribution to make to the educational enterprise. It would be well to be thoughtful about what that contribution is for each, and then pursue it with all diligence. When bounds are overstepped, the best that can be hoped for is ineffectiveness; the worst is far more debilitating.

A properly constructed policy environment (and budget as well), must be established to achieve the desired balance between internal and external determiners of the educational experiences of students. The point is not to constrain or standardize, but to liberate practice.

WALKING THE TALK

In Hawai'i, those who interpret school governance traditionally will point to the widespread practice of site-based management known locally as School-Community Based Management or SCBM, which has become the norm for the great majority of our schools since it was introduced over 10 years ago. Since 1998, Charter School legislation has enabled parents and organizations to exercise broad curricular and fiscal autonomy in creating schools that they deem most appropriate for their children.

These are examples of governance reform in structural terms. Of equal importance and perhaps more liberating and promising is what is occurring in classrooms. The exclusive, "Educators Only" door that guarded curriculum and instruction for decades has been thrown wide open. Planning lessons for all students to meet standards is a collaborative venture. Because the learning targets are clear and public, and because responsibility for learning success is widely shared, all stakeholders—especially students—participate in the choices that shape their educational experiences.

Standards-based education supported with training, resources, and accessibility cannot ensure that all children will meet standards, if children are not physically, socially, or emotionally ready to learn. The Strategic Plan describes our best effort to address these needs among children through a school-based service delivery model, which is the foundation for a comprehensive student support system. This system represents a seamless continuum of care. It includes a wide range of support services to ensure a supportive physical environment for students. This system also addresses social, emotional and physical needs for healthy growth and development in support of academic pursuits.

GOOD JUDGMENT

#6: Standards-based reform requires and promotes a necessary climate of trust among various constituents within the educational system.

Much of standards-based reform depends upon the exercise of sound professional judgment. The determination of appropriate curriculum and learning experiences; the diversification of instruction to meet the needs of individual students; the judgment of quality in student work in new assessment contexts; and the assessment of the performance of professionals are all examples where wise professional judgments are required if standards-based reform is to succeed.

One major change implicit in much of the current reform effort is that it prizes the judgment of professionals. Standards-based reform must argue for enriching and capitalizing upon the insights provided by sound professional judgment.

However, it is not sufficient merely to argue that trust simply should be extended to professionals. While trust is a necessity, it is equally important that professional judgment be trustworthy. This implies the mutually obligatory nature of professional growth.

In other words, sound judgement is essential to professional respect and trust, and that judgement is achievable only through an investment in people in the form of professional development. The obligation exists on the part of the system to make opportunities and support for growth and development available. It exists also on the part of professionals to engage seriously in those opportunities. Only given that mutual commitment can the necessary extension of trust be warranted.

WALKING THE TALK

For standards-based reform to succeed, professionals must have expanded instructional repertoire and assessment tools. Research and practical experience are clear: Educators make a difference, and the most effective use of resources is to invest them in professional development to enhance the capacities of professionals.

We have changed our policies to ensure that continuing education credit will be awarded only for professional development that is focused on achieving the standards and uses the approaches and techniques of effective professional development practice. Simply put, for continuing education to be an effective policy tool in the way we would like, it must focus on content that matters and it must incorporate what we know to be best and effective practices.

The decades old DOE B-Credit system that was based on seat time, has been replaced with the PD Credit or Professional Development Credit that models the same standards-

based elements to learning being practiced in classrooms. The PD Credit requires involvement of participants at the outset—clear learning targets aligned to student standards, grounded in their experiences, and supportive of their needs. The PD credit is not fully earned nor granted until there is evidence over time that the learning has been demonstrated, applied, and assessed—this usually takes the form of a portfolio of evidence.

The Professional Development Coordinating Council oversees the same standards-based requirements in other professional development opportunities within and outside of the department. Part of its responsibility is to ensure there is a fit between professionals' needs and training opportunities, to avoid duplication of services. The Council also is charged with ensuring access to professional development opportunities for personnel on neighboring islands.

DRIVE FUNDING

#7: Standards-based reform will enable a more appropriate and equitable allocation of funding and resources according to desired outcomes and needs.

All stakeholders and stakeholder groups served by the educational system must monitor constantly the attainment of the standards. In addition, examination of relevant data should depict the challenge faced by the system in serving the needs of each group. Taken together, these analyses must inform the distribution of funding and allocation of resources to ensure the successful accomplishment of the standards by all.

Under the standards-based reform effort, equity essentially is redefined. Where once it meant equality of opportunity and uniformity in the support necessary to provide those opportunities, it now must mean equality in the attainment of the desired outcomes by every student.

Standards-based reform shifts the focus away from identical resources and offerings as the measure of equity to the apportionment of resources as is necessary to achieve equity of outcomes. It then maintains the rigorous attention to those outcomes. This suggests a profound revision of budgetary policies and constitutes an immense shift in the public's perception of fairness.

WALKING THE TALK

Decisions about resource allocation and use are shifting in mindset from, "we've always had this program" to "this program helps students meet standards in these ways." The Department has just completed an extensive review of all of its programs and some that cannot establish a direct link to the standards are being recommended for elimination, while others are undergoing a standards-oriented retrofit. One example is the sabbatical leave program. In the selection

criteria for sabbatical leaves, efforts are underway to place less emphasis on seniority, and more on standards-based professional development and potential contribution back to the field and the system.

Through their Standards Implementation Design, schools are linking their resources, including their budget, to their standards-based priorities. State and district offices will be held accountable for doing the same through a similar process. The Standards Implementation Design does not insist on the educational program to be pursued by a school, but it does insist that there be one. Similarly, the Standards Implementation Design does not insist on how resources are allocated and used—but it does insist that they be used in service to the standards.

DAUNTING TASK

While rapidly gaining acceptance, the belief that all children can learn, and learn more and better than we have expected in the past is by no means universally shared or practiced—yet. We must continuously press to make it so. This alone is an incredible challenge to the system, its values, and the way that it is constructed. And we can say that we have begun to engage that challenge fully.

This may well be the first time that the educational system has affirmed its responsibility to educate all students, and to do so to the same high standard. That sense of obligation must come to permeate the belief systems of all educators and policymakers. Students and parents must join in and affirm and uphold their responsibilities as part of this system also. Through joint partnerships, focused efforts, and concerted actions on everyone's part—ALL children will learn...they will learn to high and rigorous standards...and they will do it in our lifetime.

Paul G LeMahieu, PhD, was superintendent of the Hawai'i Department of Education, 1998-2001.

ADDRESSING STANDARDS THROUGH A COMPLEX-WIDE CHANGE PROCESS

KATHY KAWAGUCHI AND KATHRYN AU

In the fall of 1999, the Hawai'i State Department of Education began releasing its revised content standards. The following spring a new state test, addressing selected standards in reading and mathematics, was administered at grades 3, 5, 8, and 10. In these moves Hawai'i followed the trend in the vast majority of states toward basing assessment programs on state standards. In Hawai'i, as in other states, test results are likely to have serious consequences for students and teachers. For example, in some other states, students are required to achieve a passing score on a standards-based test in order to graduate from high school. In short, the changes occasioned by the standards movement are likely to be far-reaching (Glaser, 1993).

In Hawai'i's public schools, the challenge of addressing the revised standards and the new testing program came about while the state was continuing to cope with budget cutbacks, as well as costly, court-imposed requirements for improved services to special education students. Widespread standards-based reform was called for when few resources were available to support schools in the change process.

This article describes how one set of schools, the Mililani complex, responded by implementing a project to guide teachers through the standards-based assessment process. Located in a suburban area of central O'ahu, the Mililani complex consists of Mililani High School and the schools that feed into it: Mililani Middle School and four elementary schools -- Kipapa, Mililani Mauka, Mililani Uka, and Mililani Waena. Enrollment in all these schools is extremely high; the elementary schools have an average of 800 students, while the middle school enrolls 1,800 and the high school 2,100.

With leadership from the first author, the Mililani Complex applied for and received a federally funded Goals 2000 grant. The first author, who was then the school renewal specialist for the complex, began the process by asking the principals if they were interested in applying for a grant to address the new state content and performance standards. When all the principals agreed to participate, the first author convened two meetings involving the principals and their school's leadership teams. During these sessions, which required a total of eight hours, participants worked together to identify the need, goals, objectives, activities, evaluation plan, and budget. Involving a large group of school leaders in a collaborative and generative process, from the very inception of the project, set the stage for an unusually high level of commitment throughout the 14 months of the project's implementation. The goal of the project was the following: To develop a K-12 complex system for the development and assessment of student progress toward the achievement of two Hawaii Content and Performance Standards II reading standards: Comprehension Processes and Response.

These are the two reading standards addressed in the new state test.

Research suggests that principals and vice-principals can play a key role in the change process by building and maintaining a school vision, in this case one that focuses on student learning (National Association of Secondary School Principals, 1996). In the Mililani complex administrators not only participated in development of the project but were present at all of the teachers' work sessions. In addition, they provided the teacher leaders from their schools with time to engage the other teachers in project activities.

Four day-long work sessions, one per quarter, were held during the 1999-2000 school year. Each school sent a team of eight or more participants. The elementary schools had representatives from the various grade levels, while the middle and high schools had representatives from the different departments. The sessions were facilitated by the second author, a reading educator and researcher, and followed a common format. Each session began with sharing by the schools of the work they had accomplished for the project. This activity typically took the form of a gallery walk. Each school set up a display of charts, student work, bar graphs, or other items, which participants from other schools came by to examine. After soliciting responses from the group about the work they had seen, the facilitator introduced the next task the group would be undertaking.

Participants engaged in a simulation of the task so that they would be prepared to lead a discussion aimed at the same purpose when they returned to their schools. Participants discussed the challenges posed by each task within their school teams as well as with the whole group. Most of the remainder of each session consisted of time for the teams to make plans for implementation at their own schools. Each day concluded with the schools presenting the steps they planned to take next.

In the beginning many of the teachers did not feel enthusiastic about the standards-based assessment project. The following comment reflects teachers' early concerns:

It was difficult at the beginning to fully understand how everything fit together. The task seemed so enormous. The first meeting was overwhelming.

The teachers' uneasiness may be attributed to both the content and process of the sessions. In terms of content, most teachers had little background in standards-based assessment. In terms of process, the approach followed was foreign to the majority of the teachers, who were accustomed to the traditional workshop form in which packaged information is presented and participants are not required to act upon the information.

In contrast, this project required the teachers to:

- discuss their philosophies of teaching, learning, and literacy
- develop a school vision of the excellent reader
- develop grade level benchmarks
- align grade level benchmarks with the state standards
- develop student I Can statements based on the grade level benchmarks
- develop instructional activities to address the grade level benchmarks
- collect evidence of students' progress toward meeting the benchmarks
- prepare bar graphs summarizing this evidence.

For a detailed description of these tasks, see Au (in press).

OUTCOMES

As this listing of tasks shows, project participants were required to do a great deal of work, not only at the Goals 2000 sessions but at the school level. Every school succeeded in accomplishing all of the tasks, from drafting a vision of the excellent reader to preparing bar graphs summarizing evidence of student learning. Thus, the project met its goal of developing a K-12 complex-wide system for assessing student progress in meeting the targeted reading standards. To the best of our knowledge, the Mililani complex is the first in the state of Hawai'i to achieve all of the steps listed above within the framework of standards-based assessment.

Yet, in our judgment, the more significant outcome of the project was not the system and products developed but rather the gains in teachers' understandings of standards-based assessment process. Teachers learned by immersing themselves in the process and by overcoming difficulties, as indicated in the following comment:

I was involved from the beginning. At first, there was a lot of confusion – When to start? What to do? Then, as we literally jumped right in, things just naturally started to fall into place although this wasn't always easy. It took a lot of work on my grade level (there was a lot of head banging).

Teachers realized that they could not address standards in a passive way, but had to become actively involved by constructing pieces of the assessment system themselves. Only in this way could they see the benefits of working with standards. A teacher wrote:

Now that I've gone through the process, I see the merit in developing the I Can statements and rubrics. I feel a

sense of ownership. It helped clarify the standards, brought the grade levels together, and led toward better teaching and students achievement.

Teachers learned how the pieces of the puzzle fit together in standards-based assessment. For example, as shown in the following comments, they came to understand how benchmarks helped them meet demands for accountability.

... this process flows right into accountability for students, teachers and parents. Once the expectations, benchmarks are set, everyone knows where to go from there.

Clarity of expectations, in turn, led to improvements in teaching and learning, as shown in the following teacher's comments:

The standards-based assessment process gives you focus on what you want your students to learn. As a teacher, you become clearer on what you need to teach and assess. This process also enables you to look at the learning process. We become more aware of the strategies we use in the classroom to insure learning is taking place. We can also refine/revise our instructional methods and tools we use to enable better learning to take place with our students.

FACTORS CONTRIBUTING TO SUCCESS

Participants' evaluations of the project highlight several factors contributing to its positive outcomes. First, adequate time for the participants to meet as a complex leadership team, as well as in their school teams, proved vital to success. Because time during each meeting was scheduled for school teams to evaluate their progress and plan next steps, participants were able to step back and reflect thoughtfully on what they had accomplished and needed to do next, in a manner not generally possible during the course of a busy school day. For example, they were able to discuss the question of how to reach out to other teachers who did not share their enthusiasm for what the project was trying to achieve.

The quarterly, day-long meetings gave participants a chance to learn from the progress being made by other schools. Often, one school's solution to a problem was adopted by other schools. Particularly significant was the opportunity for the elementary school teachers to learn about the issues faced by the middle and high school teachers and vice versa. One participant wrote:

As a high school teacher, I am thoroughly impressed with our elementary and intermediate feeder schools. No wonder I get to work with such wonderful students.

Participants were encouraged by knowing that the six schools in the complex, from the elementary to high school levels, had common goals and were moving forward together. Many participants believed that the project brought the whole complex closer together. Some participants stated that parents would appreciate knowing that the schools in the complex shared common goals for student learning.

Second, the project required participants to figure out for themselves how standards-based assessment could best be implemented in their own schools. While the project provided guidance in the form of a general process, no pre-existing models were given for the participants to adopt or copy. As they worked through the process themselves,

We believe that the process of implementing standards must be a collaborative one in which teachers learn by doing – constructing the meaning of standards for themselves.

participants found that there were no shortcuts and that they had by testing and refining their approaches. A teacher observed:

I think we had to go through the hardships of understanding the process and the continuous revisions for all of us to understand these two standards.

While many participants felt the process was overwhelming in the beginning, they found that it became clearer as time went on. One of the insights gained was that the process of standards-based assessment and school improvement was ongoing and “never really finished,” as one participant wrote. Another teacher had these insights:

At first I couldn't understand why we were only focusing on two strands. After all, weren't we going to be responsible for all of the content standards? Wow, was I mistaken! What I learned was a process – a process of hearing, understanding, communicating, trying out, revising, discussion again, questioning, and really understanding.

Third, the project took the approach of recognizing the unique nature of each school, building upon the participants' professional knowledge and promoting their ownership over the change process. This meant that, although schools were expected to consider the broad guidelines provided by the project, differences among schools in the application of these guidelines were both expected and respected. Participants appreciated the consideration shown for their past efforts and the programs they already had in place; they felt they could

build on their strengths while addressing weaknesses. One teacher commented:

Since our starting point was acceptable no matter what we attempted to do, this process was non-threatening.

Each school developed its own vision of the excellent reader, grade level benchmarks, I Can statements, procedures for collecting evidence, and rubrics. These products reflected participants' knowledge of their students and school community, as well as their professional judgment about how students could best be helped to become excellent readers. Honoring the autonomy of each school did not lead them to choose highly divergent paths. An underlying philosophical consistency could be seen in the vision statements and grade level benchmarks, and each school aligned its benchmarks to the state content standards. Convergence in thinking increased as the year progressed, as schools drew upon one another's best ideas.

Fourth, the project had a specific focus and specific goals that, while challenging, were seen as attainable. The project addressed standards-based assessment in only one academic area (reading) and with only two of the six standards in this area. Yet even with this focus, participants felt overwhelmed at times, suggesting that greater demands might have resulted in failure. Participants benefitted from the clarity of the project's approach, which allowed them to think deeply about a few issues at a time instead of having their attention constantly diverted. Participants saw two standards through from start (creating grade level benchmarks) to finish (displaying student achievement results in bar graphs). In contrast to their experiences in some other professional development projects, participants ended up with products as well as knowledge. They had something to show for their hard work, in the form of grade level benchmarks, I Can statements, rubrics, and bar graphs. Participants were pleased that they had learned a process that could be applied to other standards across the subject areas.

Fifth, the project brought student achievement to center stage in a way that made a practical contribution to teachers' professional development, as well as to new forms of collaboration with students and parents. Collecting their own standards-based achievement data gave teachers a greater awareness of their students' accomplishments and needs as readers. They came to understand how assessment could be a tool for improving their teaching. One teacher stated:

The standards-based assessment process impacted my whole outlook as to my teaching and assessment of students. I now truly see assessment as a tool for teacher improvement.

In many cases, because teachers helped students to become aware of the standards, through I Can statements and rubrics, students had a much clearer picture of the kind of learning they were expected to show. At some schools, data were shared with parents. Parents could see where their children stood with respect to the rubrics, they became aware that a schoolwide effort to improve achievement was in place, and they could see that the schools in the complex were working together.

CONCLUSION

The task of implementing standards-based assessment is certainly demanding. This project demonstrated that much could be accomplished in a year, in terms of laying the foundation for wide implementation of standards-based assessment. However, a longer term, ongoing process for change will need to be in place in order for schools to build upon this foundation. At the end of the project, participants' recommendations included a continuation of complex-wide meetings, as well as additional time to work with standards at the school level.

The results of this project suggest that the key to the success of the standards movement over the long term may well lie in teachers' ownership over and involvement in the change process. This conclusion may seem surprising, given the obvious tension between standards, which is associated with a centralist vision of education, and teacher empowerment, which reflects a populist vision (Clark, Hong, & Schoepach, 1996). Despite this apparent contradiction, we achieved good results in this project by taking a collaborative view of the implementation of standards-based assessment. We believe that the process of implementing standards must be a collaborative one in which teachers learn by doing – constructing the meaning of standards for themselves. Only in this way will they understand fully how to involve their students in similar processes of learning that lead to high achievement.

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THE NEW HAWAII CONTENT AND PERFORMANCE STANDARDS II STATE ASSESSMENT

MICHAEL HEIM

"Assessment and accountability is where we say that our expectations for the students and for ourselves are serious, and that we will take them seriously."

"It is inconceivable that we would ask teachers to teach to the standards and then assess on something else. Yet that is a very realistic and all too common example of the lack of coherence that we seek to correct..."

Dr Paul G LeMahieu; Superintendent's Education Leadership Conference; August 10, 1999

This article describes the design, development and uses of the new Hawaii Content and Performance Standards II State Assessment, the Department of Education's statewide assessment that measures, in part, student achievement relative to selected portions of the Hawaii Content and Performance Standards II (HCPS II). The article also presents some of the key processes used in the test's construction, provides details about its major characteristics, and outlines the steps that remain to be taken to complete it.

THE NEED FOR A NEW ASSESSMENT

The new assessment is an integral part of the effort to transform Hawaii's traditional K-12 public education system into a standards-based system. In early 1999, the State Board of Education adopted a Comprehensive Needs Assessment (Hawaii Department of Education; April 1999) to establish goals and priorities for the whole of the system. Following the needs assessment, a Strategic Plan for Standards-based Reform (Hawaii Department of Education; September 1999) was developed to address the priorities established by the Board and build upon the "Images of Success" articulated in the needs assessment. The images of success are consistent threads that connect the needs assessment, the Board's priorities, the strategic plan and the specific actions within the task areas delineated in the strategic plan. Thus, much of the impetus for the student assessment and accountability systems outlined in the strategic plan can be traced back to the "Standards-Based Learning" images of success developed in the needs assessment.

In order to improve student assessment, the strategic plan outlined two broad strategies and a corresponding two-tiered assessment system: (1) a redesigned statewide assessment program called the Hawaii Assessment

Program, and (2) school/classroom assessment programs along with supports for those local activities from the state program. Together, both state and classroom assessments are seen as forming a balanced and comprehensive assessment system. As classroom assessment expert and advocate, Rick Stiggins (1999), has noted: "If assessment is not working effectively in our classrooms every day, then assessment at all other levels (district, state, national, or international) represents a complete waste of time and money" (p. 193). No single assessment can adequately provide the range of assessment information needed by students, teachers, counselors, principals, support personnel, policy makers and public.

The statewide tier of the assessment system, the Hawaii Assessment Program, is composed of two parts. The first part, the most publicly visible portion, is the new HCPS II State Assessment. The second part, the new School Assessment Liaison Program, is designed to help schools improve their "assessment literacy" efforts, particularly in the use of sound classroom assessment practices. This program and the Assessment Matters website (<http://assessmentmatters.k12.hi.us>) are the primary means of state support for schools' assessment programs and classroom assessment practices. I will devote the remainder of this article, in spite of interesting developments in the School Assessment Liaison Program, to a description of the first part, the HCPS II State Assessment.

A NEW TEST FOR HAWAII'S STUDENTS

For more than two decades, until 2000, the Stanford Achievement Test © Harcourt Educational Measurement, an "off-the-shelf," norm-referenced achievement test series served as the Department's primary student achievement measure. The HCPS II State Assessment, which incorporates a small portion of the Stanford series, shares some of the characteristics and purposes of the former, but extends those in ways appropriate to standards-based education. In broad terms, the new assessment has been designed to provide:

- Annual data on student, school, and system performance at benchmark grade levels;
- Fair, technically rigorous, and adequate measurement of performance against standards; and,
- Measures of student achievement relative to both the HCPS II and national norms.

These changes are in line with the Board of Education's policy that, "The Department of Education shall establish a statewide assessment program that provides annual data on student, school, and system performance, at selected benchmark grade levels, in terms of student performance relative to the Hawai'i Content and Performance Standards and relative to nationally representative norms" (#2520, State Assessment Program Policy). In addition, there was a strong desire to have an assessment that would be experienced by students and school staff as one coherent, seamless whole, rather than a series of disparate pieces. The new assessment was, therefore, deliberately designed as an integrated package to provide both norm-referenced and criterion-referenced (standards-based) information.

The new assessment measures student achievement relative to the HCPS II and provides a view of Hawai'i's students' mastery of the content standards through their performance on criterion-referenced (standards-based) items. Thus, student performance is compared to the criteria given in the standards. It also ensures consonance between what is tested and what is taught. Later, when statewide student assessment data is used in accountability systems, only the standards-based assessment information will be used.

Achievement on the Stanford Achievement Test's norm-referenced items provides a view of Hawai'i's students' performance compared with students in a nationally representative norm group. It also provides an external perspective to partially corroborate performance against the HCPS II. However, given the imperfect alignment of Stanford items with the HCPS II, the norm-referenced information is not to be used in Hawai'i's accountability systems.

INTENDED USES

Validity – the most important quality of a measure – is often mistakenly thought of as a technical characteristic inherent in the measure or measuring instrument itself. Actually, it is the soundness of the inferences or interpretations and uses of the measure that is the focus of validity. Thus, one cannot adequately judge the validity of a measure without a clear and explicit understanding of the purposes for which the measure was designed. The HCPS II State Assessment was designed for the following uses:

- To monitor student achievement relative to the HCPS II and national norms;
- To inform systematic improvements to curriculum and instruction (at the programmatic level) and schools' Standards Implementation Design (SID) plans and strategies;
- For school accountability, as an indicator for initial classification;

- For student accountability (rewards/recognition, assistance); and
- As an high school diploma requirement.

Additionally, the state assessment serves as an operational standard for defining an "equivalent" alternative assessment. I will say more about this use later, but for now I will offer some more details to clarify and expand upon these intended uses.

It is important to stress that the HCPS II State Assessment is not a classroom assessment system and should not be used in that way. Classroom or school assessments are valuable in guiding teachers' ongoing instruction and in assisting students to meet the standards. Results of school and classroom assessments at every grade level play a critical role in knowing how well students are learning the standards in the intervals between benchmark points and how to help with appropriate instruction. The state assessment operates at a different level by providing valuable information for conducting, for example, large-scale reviews (including school-wide reviews) of curriculum and instruction at the programmatic level. But when it comes to informing day-to-day classroom instruction and curriculum, decisions must be served by classroom assessments. Given these limitations, the standards-based or criterion-referenced results from the HCPS II State Assessment might, nevertheless, be a useful trigger to school-wide programmatic and professional development discussions. For example, they may be used to identify needs for staff development in specific instructional strategies or to review the articulation and coherence of curriculum across grade levels and within grade levels or departments.

The use of state assessment results for accountability is a complex and extensive topic that warrants a separate paper. Here, I can provide only a broad-brush sketch of school and student accountability plans in order to convey the intended uses of the state assessment in that context. Additional details can be found in the strategic plan (Strategic Plan for Standards-based Reform, Hawai'i Department of Education, September 1999). What follows is a tentative outline of school and student accountability intents, conceptual plans, and timelines.

As far as school accountability is concerned, the HCPS II State Assessment is anticipated to serve as an initial indicator of school improvement. The orientation is constructive, not punitive, and focuses on continuous improvement with a full range of consequences for observed performance. A major challenge in designing the implementation steps (which are still under development) is to balance fairness with complexity. Initial indicators will focus on students learning the standards, and, possibly, on students' safety and well-being. SAT-9 norm-referenced

scores will not be used for school accountability. Rather, standards-based proficiency scores, derived from those items that assess the HCPS II and show the proportion of students meeting or exceeding standards, will be used as indicators of student learning. Schools that have not shown agreed-upon progress on the initial indicators, as validated during an on-site visit by a School Review Team, might be classified as “assistance schools.” By 2005, schools would be classified into one of three categories: reward, recognition, or assistance. A tentative schedule for the implementation of school accountability follows:

Proposed School Accountability Implementation Schedule

- 1999-2000: Complete assessment development (except for setting performance levels).
- 2002-2003: Establish baseline for initial school accountability indicators.
- 2004-2005: Establish first comparison point. Corresponding accountability consequences would include rewards and assistance only (with no sanctions at this point).
- 2006-2007: Establish second comparison point with a full range of consequences – rewards, assistance, and sanctions.

Note that the above schedule includes a baseline, a first comparison point, and a second comparison point. Each is two years in length. Thus, “2002-2003” denotes two school years, those that end in the calendar years 2002 and 2003. Lessons learned from school accountability efforts in other states argue strongly for two-year rather than one-year data cycles. This is due to confounding factors such as cohort effects (variation in year-to-year school-aggregate achievement results attributable solely to differences in the groups of students assessed each year). It also avoids the necessity of developing a separate methodology for small schools, especially those with less than 25 students enrolled per grade level.

It may be noted that school year 2001 does not appear in the above schedule, a result of the April 2001 teachers’ strike and the cancellation of what was to be the first “live” or operational administration of the HCPS II State Assessment. Consequently, it has been necessary to reschedule all the activities that depended upon the 2001 statewide assessment.

The state assessment is expected to serve as an indicator to identify students with non-proficient performance who may need extended learning opportunities and to identify, for the purposes of recognition and reward, students with proficient performance. A tentative schedule for student accountability implementation is as follows:

Proposed Student Accountability Implementation Schedule

- 2005: “Mid-stakes” accountability - Students would be expected to demonstrate proficiency in order to participate in the state assessment at the next benchmark level.

- 2008: “High stakes” accountability - Students would be expected to demonstrate proficiency on the state assessment administered in high school in order to receive a High School diploma (pending Board review and action).

Standards-based proficiency scores are to be the basis of “mid-stakes” accountability for students as of 2005. SAT-9 norm-referenced scores will not be used to show student mastery of standards. Rather, standards-based proficiency levels, derived from the criterion-referenced portions of the assessments, will be used for that purpose. A student in Grade 5 may not take the Grade 5 benchmark assessment if proficiency on the Grade 3 assessment has not been demonstrated. Similarly, students in Grades 8 or 10 must demonstrate proficiency on the prior benchmark assessment to be eligible to take the Grade 8 or 10 assessment. This does not mean necessarily that the student is retained in grade. However, the student will not take the next benchmark test until proficiency in the prior one is demonstrated. Voluntary or mandatory learning opportunities (a wide range is possible, and preferred options and decisions are best made at the school level) must be provided in order for students to be held accountable for meeting state standards.

DEVELOPMENT PROCESS AND KEY REVIEWS

The following chart summarizes the key tasks for developing the new assessment through completion of the final assessment forms. Since the development of the new state assessment is an enormous project requiring multi-faceted capabilities and expertise, Harcourt Educational Measurement, publisher of the Stanford Achievement Test series, was contracted to assist. Harcourt will serve as the Department’s developer and publisher for the HCPS II State Assessment, and they will also provide related scoring and reporting services.

Task	Work Period or Completion Date
Develop assessment “blueprint.” Develop draft specifications for the HCPS II-based assessments in reading, writing, and mathematics at grades 3, 5, 8, and 10.	Sept. 1999
Develop items as specified in the assessment blueprint.	Sept. - Dec. 1999
Conduct item review sessions. (Review criteria: Congruence with standards, instructional sensitivity, absence of out-of-school factors, absence of bias)	Jan. 2000
Conduct field test (including user surveys, focus groups). Administer SAT-9 Abbreviated and the standards-based field-test forms to students.	May 1-15, 2000
Construct final forms. Construct final draft forms (2 per grade level in reading and in mathematics) for the operational or “live” HCPS II State Assessment. Construction of the final assessment forms included an item data review using data from the field test, as well as a forms bias review by a community panel.	Sept. 2000

Several points about the assessment blueprint may be of general interest. The blueprint required that all items for the standards-based segments of the assessment be newly

written. They were not to be obtained from previously developed assessments or from item banks. In the reading section, the blueprint called for reading passages of authentic literature: previously published pieces, often (but not exclusively) by Hawai'i authors. Given the very short item development timeline, this specification proved particularly challenging. Future editions of the assessment will use commissioned reading passages, too.

Of course, the blueprint's specifications involved practical compromises. Most notably, these related to the level of detail to be derived from the scores. While a strong argument can be advanced for designing the assessment so that it produces a highly reliable score for each of the standards measured, that approach would have led to an unacceptably long and time-consuming assessment for the three reading standards, two writing standards, and 14 mathematics standards measured. In addition, not all of the six reading and six writing content standards can be appropriately assessed in a large-scale assessment setting. For example, the reading standard "Students will read a range of literary and informative texts for a variety of purposes," can be assessed using a series of classroom assessments during the year, but not by means of a once-a-year, on-demand, pencil-and-paper assessment. In reading and mathematics, the compromise was to design the assessment to provide highly reliable "standards-referenced" proficiency level scores for the content area along with moderately reliable "indicators" or sub-scores for each of the three reading content standards assessed and for each of the five mathematics strands. These latter included the main categories into which the mathematics content standards are organized: numbers and operations; measurement; geometry and spatial sense; patterns, functions, and algebra; data analysis, statistics, and probability.

In January 2000, the sets of draft items prepared by Harcourt were subject to an intensive item review by the Department. Eighty-three (83) Hawai'i public school educators served as panelists. Panelists were teachers (regular education, special education, English for Second Language Learner, Title I), School Renewal Specialists, and school administrators drawn from all levels (elementary, middle/intermediate, high school) and geographic regions (Oahu and neighbor islands). Over the course of three intensive day-long sessions, eight item review panels (one each per benchmark grade level -- 3, 5, 8, and 10 -- for reading and for mathematics separately) reviewed draft items using four key criteria that Dr W James Popham had developed for our use. They included standards congruence; instructional sensitivity; absence of out-of-school factors; and absence of bias. Dr Popham also kindly helped with training panelists in the use of the criteria for the review. For each item reviewed, the panels had the authority to accept the item, to accept the item with an "on

the spot fix" or with specific recommendations for later modification, or to reject the item.

Only non-rejected items were used in the field test. Following the field test, an in-depth item data review was conducted in September 2000. Thirty-one (31) Hawai'i public school educators, with characteristics similar to the panelists who conducted the item review, met for four consecutive days in four item data review groups. They reviewed the field test data and the field test items for compliance with item/form specifications, for statistical quality, for adherence to criteria for writing multiple choice and constructed response items. They also reviewed, once more, for congruence of the items with the standards assessed and the benchmarks corresponding to those standards. The item data review groups decided whether to accept or reject items (and, for reading items, the associated reading passages) for inclusion into the final test forms.

Immediately following the item data review sessions, drafts of the final forms were assembled. The draft forms were then reviewed for overall "forms bias" by a community review panel. Forms bias, while similar to item bias, can occur at the level of a complete form and may not be detected during an item review. For example, it may take the form of gender stereotyping where girls are generally portrayed, over the course of an entire form, in passive roles and boys in active roles.

The community review panel was composed of twelve (12) members who met for two consecutive days. They represented a variety of stakeholder sectors, e.g., higher education, Board of Education, Superintendent's Education Cabinet, Office of the Attorney General, Hawaii State PTSA, The Hawaii Chamber of Commerce/Small Business, military community, Filipino Chamber of Commerce, Hawaiian language advocate/specialist, parent/City & County of Honolulu official, teacher/HSTA member. Most panelists had multiple work and community roles. As a group, the community panelists represented a variety of demographic characteristics (ethnicity, gender, island residence) and a full range of expertise with large-scale student assessment. They reviewed each final test form as a whole in terms of bias or stereotyping and recommended accepting or rejecting each final test form.

As a result of the above development processes, two final forms were produced for each grade level benchmark in reading and in mathematics. (A somewhat different but roughly parallel set of processes was used in the development of the writing assessment prompts, rubrics, and sets of training and anchor papers.) For actual use, one final form was to be used in operational administrations and the second form held in reserve as a "breach" form in the event of assessment administration or security problems.

MAJOR CHARACTERISTICS

Listed immediately below are the major characteristics of the new assessment. An outline style is used to facilitate reading and for reference.

Content areas:

- Reading
- Writing
- Mathematics
(Other areas, such as science and social studies, may be phased in over the years.)

Benchmark grade levels:

- Grade 3 -Assesses mastery built from Grades K-3
- Grade 5 -Assesses mastery built from Grades K-3 plus 4-5
- Grade 8 -Assesses mastery built from Grades K-3 plus 4-5 plus 6-8
- Grade 10 -Assesses mastery built from Grades K-3 plus 4-5 plus 6-8 plus 9-12
(Note: Students may begin “challenging” the high school assessments in Grade 10.)

Standards-based content measured directly:

- Reading: Response to Text, Comprehension Processes, Conventions and Skills
- Writing: Rhetoric, Conventions and Skills
- Mathematics: Numbers and Operations; Measurement; Geometry and Spatial Sense; Patterns, Functions, and Algebra; Data Analysis, Statistics, and Probability

Norm-referenced content measured via the SAT-9 Abbreviated:

- Reading Comprehension (30 items)
- Mathematics Problem Solving (30 items)

Note: Selected SAT-9 Abbreviated items also contribute to the standards-based Reading and Mathematics scores.

Number of “Double Duty” SAT-9 Items		
Grade	Reading	Mathematics
3	8	29
5	9	26
8	10	18
10	16	8

These “double duty” SAT-9 items were identified by a panel of curriculum and measurement specialists as satisfying the requirements of the assessment blueprint and the criteria of “standards congruence.”

Item formats:

- For the standards-based Reading and Mathematics segments
 - Multiple-choice items: 1 score point each
 - Constructed response items of various lengths: 2, 3, or 4 score points each
- For standards-based Writing assessment (essay writing to a prompt)

- Scored on five dimensions (Meaning, Voice, Clarity, Design, Conventions) using rubrics with scales of 1-5 points for each dimension
- For SAT-9 Abbreviated Reading and Mathematics segments
 - Multiple-choice items: 1 score point each

Types of scores:

- Standards-based proficiency scores: Exceeds proficiency, meets proficiency, approaches proficiency, well below proficiency
- Norm-referenced scores (e.g., stanines, national percentile ranks)

Number of administration sessions:

- Reading: 3 sessions
- Writing: 1-2 sessions (1 session for Grade 3 and 5)
- Mathematics: 3 sessions

Total time requirements:

- Total time required: 6 hrs. 51 min. (grade 3) to 8 hrs. 46 min. (grade 10), which includes time for distribution and collection of materials, reading directions to students and, for the writing assessment in Grades 8 and 10, a 10-minute rest break between sessions.
- The standards-based segments have suggested administration times but, strictly, those segments are not timed. The SAT-9 Abbreviated segments must follow the publisher’s standardized time requirements in order to produce valid norm-referenced scores.

(Note: The total time requirements reflect, in part, the design characteristics of the standards-based segments of the assessment and are larger than what would be expected based on experience with multiple choice tests. On the standards-based segments, students often produce a response rather than only select a response. The standards-based segments are intended to function as “power” rather than timed tests. For Grades 8 and 10, the writing assessment includes a revision process, and that takes more time than a first-draft only writing sample would require).

Provisions for special populations:

- IDEA-eligible & Section 504 students
 - SAT-9 accommodations
 - Standards-based segment accommodations
 - Alternative Assessment
- ESLL students
- Hawaiian Language Immersion Program students
- Students with serious disciplinary action status
- Students on home/hospital instruction

(Note: Appropriate accommodations and alternatives to the HCPS II State Assessment must be provided in order to enable all students to participate).

Special materials and equipment needed:

- None

Materials packaging:

- Student assessment materials will be packaged as consumables

- Reading (both standards-based and norm-referenced segments) and writing will be packaged as one language arts assessment booklet at the elementary level and as two booklets (reading, writing) at the secondary level.
- Both mathematics segments (standards-based and norm-referenced) will be packaged as one mathematics assessment booklet.
- A separate scannable answer document will be used at all grade levels.

Scoring:

All scoring will be conducted externally by Harcourt Educational Measurement. Harcourt has been contracted to serve as the Department's developer and publisher for the HCPS II State Assessment and also provides related scoring and reporting services.

Reports:

- For the 2002 assessment, two "waves" of reports will be provided.
 - Interim consolidated reports that contain norm-referenced SAT-9 scores and raw (total points) scores for the standards-based assessments. These reports are "interim," pending the completion of work to establish cut-scores and the associated proficiency levels. (Aug. 2002)
 - Final reports to the schools, district, and state. Contents of these updated reports for the 2002 assessment will show proficiency scores for the standards-based assessments, as well as the previously reported SAT-9 scores. These reports will become the "model" for future assessment reports. (Nov. 2002)
- 2003 & thereafter: One set of consolidated reports annually (August)

STEPS REMAINING

Results from the first "live" administration of the HCPS II State Assessment were to be used in setting proficiency levels (exceeds, meets, approaches, and well below proficiency) for the standards-based reading and mathematics assessments. The April 2001 teacher's strike, however, necessitated canceling the assessment. Consequently, the remaining development work, shown in the chart below, had to be deferred one year. A revised schedule is provided below.

Task	Work Period or Completion Date
Administer the HCPS II State Assessment.	Apr. 2002
Score the assessment and produce interim reports. Distribute interim reports to the schools, districts, and state offices. Contents of these interim consolidated reports will contain norm-referenced SAT-9 scores and raw scores (total points) for the standards-based assessments.	Aug. 2002
Set proficiency levels. Recruit school staff and community members to serve on proficiency level setting panels.	Aug. 2002
Secure the Superintendent's and Board of Education's review and approval of the proficiency levels recommended by the panels.	Oct. 2002
Produce final reports. Generate updated reports for the 2002 assessment and distribute reports to the schools, districts, and state offices. Contents of these updated consolidated reports will contain norm-referenced SAT-9 scores and proficiency scores for the standards-based assessments. (Begin establishing baseline data for the school accountability system.)	Nov. 2002

WHAT COMES NEXT?

Work has already started on developing "Generation II," the next edition of the state assessment which is scheduled for operational use in 2004. Initial item reviews for that edition will be held in fall 2001. Items for Generation II will be field tested by embedding and spiraling them in student's booklets in the 2002 administration, obviating the need for a separate stand-alone field test administration. Work is also underway to develop "alternative" assessments to the HCPS II State Assessment. The HCPS II State Assessment (Generation I), now almost completed, serves as the operational standard – in terms of breadth of coverage, depth of academic rigor, and technical quality – which proposed "equivalent" alternatives to the state assessment will be evaluated. The HCPS II State Assessment should not be confused with the Alternate Assessment, which is used for students for whom the HCPS II is inappropriate. Work in two areas of alternative assessment is in development. First, planning is being conducted for a feasibility study to assess the prospects for developing Hawaiian language versions of the state assessment. Secondly, an exploratory study has been started that is looking at "equivalent" alternative ways by means of which students could fairly, credibly, and validly demonstrate their attainment of the standards.

We are, finally, near the point where it will be truly "... inconceivable that we would ask teachers to teach to the standards and then assess on something else" (Dr Paul G LeMahieu; Superintendent's Education Leadership Conference; August 10, 1999). But this is only one part of the Hawai'i Assessment Program. The other essential part will require enhancement of teachers' assessment literacy and their use of sound classroom assessment practices. Both parts are vital to the success of standards-based education – in every classroom, for all students, every day.

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IMPLEMENTING STATE MATHEMATICS STANDARDS IN HAWAI'I: A PROFESSIONAL DEVELOPMENT MODEL

JOSEPH T ZILLIOX AND NEIL A PATEMAN

INTRODUCTION

Hawai'i is in the process of implementing new K-12 State content and performance standards in ten content areas including mathematics. As part of this work, the State Department of Education (DOE) formed several committees to produce final draft versions of each set of standards. We, the authors of this article, together with the State mathematics consultant were invited to serve as members of the mathematics committee. On completion of our committee work, we were asked to participate in a project with the DOE to help teachers become familiar with the standards and to find effective ways to develop standards-based curriculum in their classrooms. A further aim was for Department staff to collect exemplars of student work. Student responses to tasks were then used to establish performance indicators in relation to established benchmarks. Finally, the project aimed to help teachers develop criteria for judging the quality of this student work.

The question of quality is an important factor in the process of developing standards-based curricula and methods of assessment. The guiding principle for the project was that the supporting evidence of quality rests in the students' work. The long-term aim is to have the DOE post samples of tasks, student work and teacher commentary on the internet as a resource for teachers.

Our interest was both complementary and supplementary to that of the DOE staff. We consider that improving teachers' knowledge of mathematics content is an important component in the difficult task of learning to make judgments about student work; without knowing mathematics content in some detail, teachers may miss important indicators in the students' work. A Title II Eisenhower teacher professional development grant funded our participation.

This report summarizes the activities of the project, the purposes of the grant and how it was implemented, together with insights into the disposition of the teachers at the beginning and the end of the project. We also provide information about the teachers' evaluations of the effectiveness of the project, describe the outcomes for the participating teachers, and include items of continuing interest for those teachers.

MATHEMATICS STANDARDS IN HAWAI'I

One principle in the development of the new standards in Hawai'i was made very clear to the writing and editing teams

and that was that these new standards were to be written for all students:

"The mathematics content standards are clear, broad statements that identify what all students should know about mathematics and be able to do using mathematics in order to make sense of the world around them, and help prepare them to use." (Hawai'i Content and Performance Standards II: Mathematics, p. 2.)

At the same time the writing and editing teams were charged with ensuring that much more attention be given to updating and expanding the mathematics content of the standards. The Introduction to the Hawai'i Content and Performance Standards II made it clear that we needed to go beyond the expectations of the previous state curriculum guide in this respect in changing expectations for teaching mathematics.

"Mathematics is seen as both a science of pattern and order and as a form of communication for describing the world. As such, instructional practices must actively involve students in exploring, conjecturing, analyzing, and applying mathematics in both real-world and mathematical contexts, and in communicating mathematical ideas. With instructional emphasis moving from just 'getting the correct answer' to justifying the solution and communicating how that solution was found, assessment of mathematical understanding using a variety of methods has become an integral part of instruction. Such assessment must link directly to the student learning standards that it seeks to measure. As part of this change, the use of mathematical tools and representation has also become necessary to help students see and understand concepts as they do math." (HCPS II: Mathematics, p 1.)

Thus, in the new standards document, which is closely aligned with NCTM (2000), the state has expressed a clear commitment to upgrading the content of the mathematics to be taught. It also influences teachers in their choices of resources and methodology for teaching mathematics. However, it is one thing to create a document expressing these wishes but quite another to expect a rapid and complete state-wide implementation within classrooms. What was needed was a professional development plan to provide long-term support to help teachers meet these new requirements.

The final form of this Eisenhower project, a beginning step in providing such support, involved a broad collaboration. The participants included State DOE mathematics personnel, members of the mathematics department at Kapiolani Community College, University of Hawai'i mathematics education faculty and mathematics faculty from the university. Our aim was to develop and test a professional development model for preparing teachers to deal with both the mathematics and the methodology changes written into the new standards.

PROJECT OUTLINE

The professional development model that was the basis for the project consisted of three elements:

- teachers would learn to judge the quality of children's work collected from their own classrooms
- teachers would learn some of the mathematics content now introduced in the new standards
- teachers would learn to write tasks to determine whether their students were meeting the new standards.

Our aims at the first meeting was to introduce teachers to the elements of the model, impart information about the new state standards and show how best practice can be incorporated into the teaching of mathematics. The first session introduced participating teachers to activities designed to refresh their knowledge of the mathematics now required in the new standards. If they were unfamiliar with the content the activities would provide a springboard to learn it. At subsequent meetings teachers engaged in a cycle that began with reflection on student work, proceeded to the development of new tasks based on that reflection and ended with increased knowledge of content and standards. Each meeting engaged the teachers in more mathematics activities to extend or refresh their mathematics knowledge in topics such as statistics and probability, geometry and measurement, and patterns and algebraic thinking.

Collaborative learning was the underlying theme for all three elements. Teachers worked in all of three group formations: school level groups, cross-school grade level groups and cross-school/cross grade-level groups. The following is a sample task that teachers worked on in their groups and adapted for use in their classrooms:

"DO NOT LOOK IN THE BAG. Working in pairs you are to determine the colors of the cubes in the bag without looking. Each bag contains eight cubes. Some cubes may be the same color and some may be different. You may take one cube out at a time, record its color, replace it, and shake the bag. (This is called sampling.)

You may repeat this as many times as you feel is necessary until you are fairly sure you know what is in the bag. Still DO NOT LOOK IN THE BAG. Several pairs will be called upon to explain their predictions to others."

Another example shows a task designed to challenge teachers' own mathematical thinking:

"Take the cone, pyramid, cylinder, and cube. Compare the base and height of each. Estimate: How many pyramids will it take to fill the cube? Use beans to check your estimates. Estimate: How many cones will it take to fill the cylinder? Use beans to check your estimates. What can you generalize from this? Estimate which holds more, the cone or the pyramid. On what is your estimate based? Use the beans to check your estimates. Estimate, then calculate how many cubic cm fit the cube. Fill one plastic cube with water. Estimate the mass, then weigh to determine it. What weight of water will fill the cone and the pyramid? Approximate each and justify your approximations."

These tasks and similar problems served more than one purpose. Teachers wrestled with mathematics ideas that developed their own content knowledge. They dealt with tasks that were also suitable to use with their students. And when used in classrooms, such tasks often presented teachers with a wide variety of student responses, thus furthering the development of their skills in judging the quality of children's work.

Group work promoted teacher discussions about how to use these and similar tasks in the classroom and engaged them in debate about how to implement teaching strategies compatible with the new math standards.

IMPLEMENTING THE PROJECT

The project was implemented through a series of full-day workshops, six for each participant. In order to produce maximum effectiveness at the school level, participation was invited from schools that could guarantee that a majority of their faculty would attend.

From a pool of over 300 applicants, 172 teachers were chosen from 7 schools and organized into four sites based on geographical location. (See Table 1.) As part of a cost-sharing commitment the DOE provided funds to pay for substitute teachers for all participants for each of the six days at all four sites.

At all the sessions, teachers worked in grade level teams for the first two hours on assessing and judging the quality of the student work that they brought from their classrooms.

DOE staff took the lead in each of these beginning sessions,



“How many people fill a meter cube?” asks Neil Pateman.

as the teachers worked together to evaluate the quality of student work. At the same time, they learned how to develop standards-based tasks and adapt them to their own needs.

During the next two to three hours, teachers worked in cross-school, cross-grade-level groups, under the guidance of university mathematics and education faculty, on tasks designed to extend the teachers’ own knowledge of mathematics. Finally, they were grouped for the remaining two hours according to their school and grade level. Their task was to design new activities based on the state standards and aimed at developing skill in teacher assessment of student’s mathematical knowledge. Thus, during each session (except the sixth) teachers were able to produce a set of standards-based tasks to use with their students. Student work in response to these tasks was then collected by teachers and used to provide the material for the first, two-hour group work of the following session.

The project concluded with a final meeting in which all the teachers presented their findings and shared their future plans for adapting their curriculum, teaching and assessment strategies to meet the standards.

Participants in the project were able to earn university credit and/or professional development credits provided by the DOE. Each teacher was assessed on two sets of documents. The first was a DOE assessment that measured implementation efforts and the development of benchmarks to be used to judge the quality of student work. The second was designed to meet university requirements and focused on what the teachers had learned, including reflections on the participants’ own learning processes.

Site	School	Number of Participants
Leeward I	Kaimiloa Elementary	30
	Waikele Elementary	29
Leeward II	Kapolei Elementary	25
	Kapolei Middle	9
Windward	Kailua Elementary	28
	Pu’ohale Elementary	19
Pearl Harbor	Pearl Harbor Elementary	26

Table 1: Participation by Site and School

DATA SOURCES

Data were collected from four distinct sources:

- Grade level focus groups were formed from the teachers at each of the four sites. Each focus group was interviewed twice, once during the second meeting of the project and once during the sixth meeting. The interviewer transcribed the responses during each interview, wrote summaries of the transcripts, and also wrote notes of his impressions of each interview.
- Portfolios were collected from each teacher who participated. These portfolios included:
 - Written responses to questions relating to learning of mathematics
 - Written responses to questions asking about knowledge of the new state standards
 - Samples of problem solving in mathematics
 - Samples of student work from the classroom.
- Extensive surveys were completed during the final day of the project and future action plans were collected from each school group.
- Observations and anecdotes collected and made by the university and DOE facilitators during workshop sessions.

ANALYSIS OF FOCUS GROUP INTERVIEWS

Emerging categories of teacher concerns from the first set of interviews were remarkably similar across all sites. Typically, concerns centered on the importance of standards in general. Teachers worried that they were not yet sufficiently familiar with the standards. They voiced concern that many other teachers would not be able to participate. Overwhelmingly, they felt that the state would need to do much more to assist teachers to meet the standards rather than simply focusing on

sanctions for those who failed. Teachers’ comments also indicated that the possibility of sanctions for the faculty in those schools whose students fail to meet standards is a major concern.

Because the university faculty and the DOE staff were each focusing on different concerns with each offering separate credits, the introductory session left teachers with the perception that university faculty and the DOE staff had very different expectations for the resulting teacher outcomes. Teachers were troubled by these apparently inconsistent demands. During the initial interview following the first session these comments were heard from teachers at four different schools:

Different messages are being transmitted—one from the DOE and another from the university.
 There is confusion about what needs to be turned in, both to UH & DOE.
 There are different ideas coming from UH/DOE.
 There seem to be different messages from UH/DOE.

This perception was acknowledged during the third set of meetings with the very different roles and hence expectations of DOE staff and UH faculty clarified.

At the same time that the Department was establishing standards for all students, schools were also being required to make unique provisions and expectations for special education students through IEP requirements another item of concern for participating teachers.

Teachers also made enthusiastic comments about their participation in the project. Feedback from all the participating sites indicated that teachers appreciated the opportunity to be involved, to learn about standards and to discuss mathematics teaching. At two of the sites, teachers expressed concern that their colleagues in other schools were not able to take advantage of the same opportunity.

Similar concerns re-emerged during the second interview. However teachers now felt much more knowledgeable about the standards, although they were still very concerned that the state had a large task ahead to work with all teachers, not only in mathematics but also in all other curriculum areas.

Nevertheless, teachers felt that the workshops they appreciated learning about the roles of manipulatives and the value of mathematical inquiry in teaching mathematics.

SURVEY RESULTS

Table 2 presents the results of a survey given as an evaluation instrument at the completion of all grant activities. The respondents were those project participants who were working for college credit at the master’s level. Nineteen questions were developed to assess the impact of the project on the participating teachers and solicited their opinions

Item	SA (%)	A (%)	N (%)	D (%)	SD (%)
1 I learned a good deal of factual material in this course	44	50	5	1	0
2 I learned to recognize quality work in mathematics	34	60	6	0	0
3 I developed enthusiasm about the course content	27	60	12	1	0
4 I participated actively in small group sessions	56	42	2	0	0
5 I generally understood the material presented in this course	32	61	6	1	0
6 The instructors were enthusiastic about the course material	74	23	3	0	0
7 The course instructors appeared to have a thorough knowledge of the subject	85	12	3	0	0
8 The instructors stimulated me to think about the subject matter	61	35	4	0	0
9 The instructors maintained an atmosphere of good feeling in the class	63	32	4	1	0
10 The instructors gave individual attention to students in the class	57	39	4	0	0
11 The instructors were well organized and prepared for each session	36	37	20	6	1
12 The amount of work required was appropriate for the credit received	33	47	15	5	0
13 The amount of work outside class was appropriate	27	50	16	7	0
14 Course material was effectively presented with the team teaching approach	47	43	7	3	0
15 Instruction was well-coordinated among the team members	38	42	15	3	2

Table 2: Post-sessions Evaluation Survey (N=136)

about the level of information they received in the project, its effectiveness on their ability to judge student work and other aspects of their involvement in the project. The survey also provided us with information about the general conduct of the workshop portions of the project.

The responses to the 15 questions were clearly very positive. Teachers acknowledged that the purposes for the program were satisfactorily met, and they were also generous in their praise for all elements of the program. In fact, the only negative responses made were in relation to the delay in finalizing the requirements set for the participants to earn college and in-service credits.

ISSUES FOR FUTURE CONSIDERATION

Preliminary analysis of the data indicates that different issues arose for each of three distinct groups involved in the project: (1) teachers who participated, (2) university and college faculty who led the mathematics activities and assisted in the other activities, and (3) DOE members who facilitated group assessments of students work and the development of tasks, and assisted in the mathematics activities.

For the university faculty the major concern that emerged in numerous conversations with different teachers was the relatively limited knowledge that they revealed of important mathematics topics like statistics and probability, which are now more strongly emphasized in elementary mathematics curricula. On the positive side, however, many teachers showed a great deal of interest in and enthusiasm for learning more about these concepts. They were very willing to take ideas into their classrooms and to try them out with their students. Teachers’ comments showed that they

understood that the instructional approach taken in the workshops was appropriate for them to adopt in their own teaching. Nevertheless, university faculty were troubled that a small number of the teachers saw little point in developing their own understanding and knowledge of mathematics beyond the specific topics that they were required to teach to children.

The single greatest concern that we, the university faculty, took from the project is the need to clear up a mistaken impression we heard over and over again. It appears that many teachers and administrators are interpreting the standards as providing the curriculum, and that this curriculum is to be a standardized curriculum everywhere in the state. This is not the intention of the group responsible for developing the mathematics standards. Our intention is made explicit in the language used to articulate the standards. Each school is to use the standards as a starting point for making its curriculum choices—therefore the call is for standards-based curricula, it is NOT a call for standardization of curricula. Such a call is inappropriate in a state with such diversity of areas and diversity of needs as ours.

The major issue for the participating teachers was that this project was merely a first step in helping them to prepare for implementing standards in mathematics. They appealed for continuing professional development support that involved greater levels of participation and intensity of instruction than is currently available. They felt that teachers who were unable to participate, for whatever reason, in similar projects would be disadvantaged in their implementation attempts. Teachers also expressed concern about the issue of student management in activity-based programs and how to engage students in such programs. Another ongoing concern for the teachers was whether the standards contained realistic expectations for all students. On the other hand, teachers strongly approved of the opportunity to work together for long periods of time, and felt that similar amounts of time would continue to be needed. Another issue mentioned frequently was that this in-service experience related only to mathematics, and teachers have nine other content areas to adapt to the new standards and few planned professional development opportunities.

While the DOE staff were able to collect a very large number of exemplars of student work for which teachers wrote commentary supporting their judgments, and commenting on precision of assessment, there remains the very real challenge for teachers in learning how to judge the quality of both the task used with students as well as determining the quality of their students' responses. These are issues for which no clear resolution came from this study. It may well be that these issues will require much time and energy to be devoted in further professional development.

This project made an important beginning in providing much-needed professional development support for a

relatively small numbers of teachers in our state. It demonstrated the kind of intensity of instruction needed to bring about standards'-based reforms. It also highlighted the need for a much more concerted, state-wide professional development effort to ensure that all teachers are equipped to adapt their teaching and curriculum to the new standards.

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THE IMPACT OF STANDARDS-BASED REFORM ON ROLE OF SCHOOL PRINCIPALS

MARY MURAKAMI

We envision a public school system that holds high expectations of what students should know, be able to do and care about...focuses attention, effort and resources on promoting student learning...holds each school accountable for meeting high standards of performance...

Vision of Public Education in Hawai'i, Hawai'i State Board of Education, September 1995

Implementing state-wide reform at the local level might be usefully compared to following a recipe. Quality ingredients and well-written directions are essential. However, good chefs know that it is sometimes necessary to vary the script to use ingredients available in the community, compensate for local variations, and adapt the dish to allow for the vagaries of regional tastes.

The Hawai'i standards-based reform provides schools with a recipe for change. It offers a clear vision of the necessary ingredients, and it articulates the directions for establishing high expectations and operating procedures. It unambiguously establishes a well-delineated set of outcomes. However, implementation at the local level requires more than simply following the general plan or cookbook recipe to ensure the predicted results.

Standards-based reform is a recipe for improving schools, and while the words are new, the concept is not. As a principal/chef who has been a close observer of previous disconnects between state-wide recipes for change and determined local efforts to follow the plan, I'd like to offer my reflections on the challenges of implementation as they confront individual schools. The leadership of school principals and their faculty, after all, is critical to the success of school reform.

Twenty-five years ago, with widespread community involvement, the Department of Education (DOE) developed a reform plan for implementation in Hawaii's public schools. The DOE guidelines for classroom curriculum and instruction were labeled the Foundation Program Objectives, familiar to most teachers as FPOs. These general objectives were further clarified by escalating levels of student Performance Expectations (PE's), which were then narrowed to minimum levels of required knowledge and skills, called the Essential Competencies (EC's). In addition to earning the required number of credits, students who hoped to graduate with a high school diploma were required to earn a passing score on the Hawaii State Test of Essential Competency (HSTEC). The DOE used three learner-compatible options (pencil-paper tests, competency courses, and hands-on certification centers) to hold students accountable for

learning the minimum knowledge and skills to function in society. The FPO's, PE's, and EC's were the components of the standard set of recipes in the cookbook that, if faithfully followed, would yield, it was hoped, predictable results.

In addition to believing in and complying with the DOE's vision, and in order to implement the curriculum guidelines and assessment system, principals dedicated additional time, money for instructional resources, and personnel to the mission of school improvement. We encouraged and supported teachers in aligning their curriculum to the required goals, performance benchmarks, and basic learning objectives to be mastered by all students.

Unfortunately, being told what to teach and the minimum level of acceptable student achievement proved more difficult than we expected. When our school pilot-tested HSTEC with ninth graders, only fifty percent of our students were able to demonstrate the essential skills for functioning in society. The stakes were high; all students needed passing scores on a competency test in order to earn a high school diploma.

This earlier effort at reforming the school system presents some useful lessons when considering the implementation of the Hawai'i Content and Performance Standards. First, the role of the principal as instructional leader became more intense. We needed to develop monitoring systems and hire additional personnel to keep track of students who did not meet the standards when first tested. Next, the role of the teacher increased in complexity, as curriculum became more prescriptive, and a broader range of instructional strategies was needed to ensure that all students were learning.

Teachers needed to continue providing quality educational experiences for that half of their students who had already met or exceeded the HSTEC standards. At the same time, they had to develop new courses with more emphasis on basic skills, remedial support and personal tutoring for those students who had not met the required passing scores to obtain a high school diploma. Eventually, with the effort of existing and new personnel, the plan began to pay off. Given time and adequate resources, we were able to teach the DOE's required content and skills, incorporate inclusive instructional strategies, assume accountability for monitoring the progress of each student, and provide prescriptive remediation programs to help almost all (98%) of our students demonstrate achievement at the required, minimum levels of learning.

Returning to the cookbook recipe metaphor, our goal was clear, the ingredients were available to us, the procedures were followed with sufficient flexibility to meet local needs, and we produced what the recipe called for: students who earned course credits and passed the statewide test for their

high school diplomas. As a principal, I learned from “minimum competency” testing that what gets measured, gets done. Statewide assessment for a high school diploma held students accountable for learning what the teachers were teaching.

With the new standards-based reform, I hope we will not use a high school diploma test as the only hurdle for demonstration of student mastery of knowledge and skills. In the prior reform, high school teachers in particular bore the brunt of idealistic “All children can learn” slogans, when our students came to us without actually having learned what teachers had definitely taught. Students in earlier grade levels will meet grade level learning expectations if schools can deploy the resources to assess students in an ongoing way and offer timely remediation in prescribed knowledge and skills.

Based on my previous experience, I observed that there is a limit to the amount of change that can be tolerated by a school staff in a given year. Success comes gradually as sufficient levels of support and time allow teachers to adapt their teaching and curriculum to the new standards. With HSTEC, we progressively adjusted our recipes to meet the standards. On-going professional development was essential in helping those who understood the local situation to assist in and extend the reforms.

One danger of standards-based reform is that a standard is taken as a simple prescription for all, in spite of the very real differences faced by teachers and principals. In an atmosphere of increasing litigation, principals, who are familiar with its effects on their schools, are eager for policy makers to tone down the rhetoric and quit proclaiming miracles for ALL students. Generally speaking, children and adolescents learn what they are ready and motivated to learn; their rate and degree of learning depends heavily upon the foundation knowledge and skills they bring to the learning tasks, as well as their motivation to persist when the schoolwork and life circumstances are difficult. If students learn more, it is because students, parents and entire school communities put more time and energy into academic accomplishments. We must understand and compensate for differences in ability, the all-too-often negative effects of pre- and post-birth environments, family expectations for their children, and community lifestyles that impact our work with students. Education policy makers must realize that top-down, “one-size-fits-all” reform rhetoric can mask the realities in our local schools and can overlook the difficulties and challenges that principals and teachers face every day.

Allow me to mention some of the ingredients that I'd like to see added to the reform recipe: discretionary staffing, resources for teachers, professional development support, reasonable class sizes, and adequate time to improve curriculum and instruction.

Policy makers can envision what schools should be and do, but they must also assume responsibility for building an ethos of shared accountability on the part of all stakeholders. Setting global standards is important, but increased resources will be essential if change is to be effected in the highly diverse contexts of Hawai'i's local school communities. It will be hard to serve our patrons what they have been promised by policy makers if the schools are starved of the essential ingredients for bringing about the hoped-for improvements. Our teachers must have adequate time, professional support, reasonable numbers of students, and sufficient resources to accommodate the range of differences in prior knowledge and basic skills found in our classrooms.

Finally, if Hawai'i's principals are to implement standards-based education, our roles in schools must change. Much of what we currently do is management-oriented. We cope with operational functions, diminishing resources, inadequate facilities, societal problems, the constant threat of litigation, union issues, and the challenge of supporting teachers with student discipline problems. In addition, we have to provide curriculum leadership and provide contexts for the professional development of our faculty. We are expected to generate grassroots school improvements through site-based

management councils, develop partnerships to expand the programs and services available to students, write grants to augment shrinking local budgets, and produce written reports as evidence that we are meeting the complexities of federal and state mandates. To revert to the cooking analogy, principals already have too many pots on the stove for one cook to deal with and produce quality results.

In the past five years, the idea of accountability has shifted from being a matter of student responsibility to one of school responsibility. Schools are responsible for developing curriculum, improving instruction and producing verifiable learning results. The Western Association of Schools and Colleges now requires school-wide agreement on what students will learn, as well as convincing evidence that quality learning does indeed occur in all classrooms and in all student sub-populations. Accreditation based on aggregated and disaggregated scores on student learning outcomes represents a major shift from slogans to proofs, and a change in the roles of the principal and teachers who must assemble and analyze student learning data. If it was difficult for us to help all students meet the minimum requirements of earlier reforms in the paper-pencil days, it is clearly evident that we



l-r Dr Barbara Klemm, Ann Port, Dr Judith Saranchock, Dean Randy Hitz, Lieutenant Governor Mazie Hirono, Mary Murakami, Dr Anne Freese, Dr Gay Reed and Clara Burrows



MET students celebrating the 10th Anniversary of the program: (front l-r): Beth Gusman, Debra Heyler and Carole Matsumoto (back l-r): Shari Rabacal, Gabriel Kuhia, Heather Higa and Miki Kurokawa

now need to harness the efficiencies of modern technology to expand and differentiate learning opportunities for students. In effect, we need school personnel who can implement and maintain computer-based school level information management systems to monitor student learning outcomes. Feedback about student learning is critical for making the needed adjustments in our curriculum and instructional practices. Indeed, State Superintendent Dr Paul LeMahieu advocates such a systems design approach to support the implementation of higher standards:

The Standards Implementation Design (SID) system is a tool for schools and schools communities to use in designing and redesigning relevant and quality educational experiences and services...It is focused on the school as a system...which should help schools examine how effectively they are using available instructional and organizational resources to help students attain the standards, plan for the improvement and maintenance of effective services and practices, and document and evaluate the results. It is meant to be flexible, and can and should be adjusted, modified, and adapted to serve the needs of the school and its community.

The Standards Implementation Design (SID) System
Department of Education, State of Hawai'i
July 2000

Returning to my cookbook metaphor, Dr LeMahieu's call for systemic change toward meeting higher standards provides a useful recipe for reform. The School Implementation Design (SID) provides clear directions for schools to use in accomplishing the tasks at hand. School personnel hear the

demands for better planning, higher curriculum standards, and regular assessment of student progress. However, keeping the heat on is a poor substitute for a decent level of fiscal support. Allow me to mention some of the ingredients that I'd like to see added to the reform recipe: discretionary staffing, resources for teachers, professional development support, reasonable class sizes, and adequate time to improve curriculum and instruction. It isn't possible to reach high standards simply by proclaiming them. Recipes don't make cakes; people with recipes do.

Mary Murakami served as principal of Kailua Intermediate and Keolu Elementary schools. She has been at Kailua High School since 1990-91. She was Hawai'i's State Principal of the Year in 1997, and she currently serves on the board of the Hawai'i Association of Secondary School Administrators.

THE JOURNEY TO ESTABLISH A TRUE TEACHER PROFESSION IN HAWAI‘I

SHARON MAHOE

EARLY STRUGGLES

The aim of establishing teaching as a true profession has been a long-cherished goal for many of Hawai‘i’s educators. Mirroring the aspirations of our colleagues on the mainland, teachers in Hawai‘i dreamed of a time when every child in Hawai‘i’s public schools would have access to a properly schooled and properly licensed teacher. However, in spite of the widespread appeal of this worthy goal among teachers and other educators, other voices expressed strong opposition to the idea. It was seen, perhaps, as too radical and too closely identified with the agenda of the teachers’ unions. Some leaders felt such a board would create an artificial teacher shortage, thus aggravating the system’s ability to staff its schools. Some questioned whether teachers could be trusted to govern themselves. Others demanded to know why the department of education should relinquish its authority to certify teachers to the teachers themselves.

Teachers introduced their first bill to establish a professional board in the late 1970s. The board would be similar to that of doctors and lawyers by maintaining strict standards for entry into the profession. Unfortunately, strong opposition from the Department of Education held reform of the profession in check and little progress was made. In the early ‘90s, the tide began to change and an advisory board was named to test on a small scale whether such a board was feasible. Finally in 1995, after 20 years, the State Legislature moved forward in support of a true teaching profession by approving the establishment of an independent teacher standards board.

CHRONOLOGY OF THE PROFESSION IN HAWAI‘I

In 1996, the Governor appointed the first members of the Hawai‘i Teacher Standards Board (HTSB), composed primarily of licensed teachers. Unfortunately, the legislature was initially reluctant to implement a fully autonomous board. So, while teachers could set the standards, the Department of Education would still be responsible for implementing the standards and issuing licenses. The Department remained, in effect, both employer and licensing agency--a situation which, many educators felt, posed a deep conflict of interest. One of the major concerns was that raising standards would exacerbate the teacher shortage. Consequently, the Legislature made provisions for the department to hire "credentialed" teachers, e.g. teachers who did not fully meet all licensing requirements.

The law requiring a license to teach in Hawai‘i’s public schools went into effect in June 1997. Teachers who met the DOE’s certification requirements were “grandfathered in.”

The work of the Hawai‘i Teacher Standards Board now began in earnest. In 1998, it developed and disseminated a draft document describing teacher performance and licensing standards. After statewide hearings, these standards were adopted and are now used by the department of education for issuing teacher licenses as well as for conducting state approval of teacher education programs. Careful crafting of the standards ensured that they are aligned with the standards of respected national organizations: those of the National Council for the Accreditation of Teacher Education (NCATE), the Interstate New Teacher Assessment and Support Consortium (INTASC), and the National Board for Professional Teaching Standards (NBPTS). For the first time, standards for teacher licensing in Hawaii are compatible with standards used for program accreditation, national standards for initial licensing, and standards for national certification. But even more importantly, teaching professionals – those who know best what is needed to survive and thrive in the classroom – have participated fully in establishing minimum qualifications necessary for entry into the teaching profession.

In 1999 the Hawai‘i Teacher Standards Board convened school counselors and librarians to draft performance standards compatible with the teacher performance standards as well as with the standards set by the school counselors’ and school librarians’ national organizations. The Attorney General is reviewing these so that the Board can take them to public hearing.

In 2000, Governor Ben Cayetano gave formal approval for Hawai‘i to become one of 19 partner states to join the National Commission on Teaching and America’s Future, a network of states committed to making comprehensive improvements in policies that affect teacher quality. In 2001, Hawai‘i’s NCTAF Policy Group published a report, *The Magic Weavers: Securing the Future for Hawaii’s Children*, which identified 38 recommendations for improving teaching and learning in Hawai‘i.

The Policy Group selected five recommendations for legislative action during the 2001 State Legislature:

- (1) "Give the Hawaii Teacher Standards Board the authority and capacity to set and enforce teacher standards (initial licensing, license renewal, revocation and approval of teacher education programs)."
 - (2) "Establish funding support for Professional Development Schools at the college and school levels."
 - (3) "Provide incentives for teachers to acquire licenses in additional fields or shortage areas..."
-

- (4) "Allow retired teachers to return to teaching in shortage areas without loss of benefits."
- (5) "Develop an aggressive program to encourage candidates for National Board for Professional Teaching Standards certification."

The Governor recently signed all five measures into law. As of July 1, 2002, the Hawai'i Teacher Standards Board will be responsible for issuing, renewing, revoking, reinstating and suspending teacher licenses. This time the Legislature fully acknowledged the role of the standards board and gave the teaching profession the responsibility for guarding entry and continuance in its ranks.

In recognition of the difficulties now faced by states in hiring new teachers, the Legislature gave the department of education the ability to hire staff on an "emergency hire" basis. The department must, however, report these actions monthly to HTSB by individual name, school, teaching assignment(s), progress toward licensing. The department must also annually report to the HTSB the reasons and duration of employment for emergency hires, out-of-field teaching assignments, and numbers and types of courses and students taught by out-of-field teachers.

CURRENT EFFORTS

In an effort to keep up with its new responsibilities, the Board is engaged in a number of ongoing projects. First, it is designing an online licensing and license renewal system. This system is expected to facilitate the processing of license applications and provide timely access to licensing information by applicants and employers. The Board also plans to use this technology to facilitate the approval of teacher education programs and the Higher Education Act's Title II reporting requirements.

Secondly, the Board continues to discuss a system of renewing teacher licenses. Board members are considering a license renewal system that:

- is based on multiple criteria;
- is based on HTSB standards;
- is linked to school/system efforts;
- requires a plan and teacher reflection;
- minimizes administrative effort and bureaucracy and
- is financially feasible.

Thirdly, the Hawai'i NCTAF Policy Group – sponsored by the HTSB – will take its initial list of 38 recommendations and develop a strategic plan for their adoption into law. The Policy Group will identify performance goals and measures for its recommendations so that progress can be more effectively measured.

Finally, the responsibility for administering a candidate support program for teachers who wish to apply for National

Board Certification through the National Board for Professional Teaching Standards has been assigned to the Hawai'i Teacher Standards Board. The Board is currently designing training activities in partnership with the Hawaii Institute for Educational Partnerships (HIEP), the Hawaii State Teachers Association, State Farm Insurance and Hawaii's National Board Certified Teachers in order to provide support for teachers applying for national certification.

CONCLUSION

The teaching profession in Hawai'i now has a fully operational professional body, the Hawai'i Teacher Standards Board. Teachers have come a long way from their initial attempts to establish a professional licensing board over 25 years ago. Policymakers, too, have embraced the idea that teacher self-governance, via a properly constituted professional board, is an important recognition of the special skills, knowledge and dispositions required of teachers and a vital step forward in achieving higher standards in the profession. As a result of NCTAF and the efforts of the Board and its many supporters, leaders in key stakeholder groups have a better understanding of the complex issues impacting teacher quality. Building on these efforts, the standards board is moving to provide more support and leadership in clarifying issues and identifying ways to address them.

As the Board seeks to develop a meaningful system for renewing teacher licenses, it will require increased involvement of teaching professionals to help make the system work. Teachers may be asked to sit on panels to review the plans of other teachers. Teachers may be asked to make professional judgements about whether a teacher's plan is adequately documented and completed. Teachers may be asked to do what matters most for the teaching profession.

We have made important progress, but we still have much to do.

Sharon Mahoe is executive director of the Hawai'i Teachers' Standards Board.

REFLECTIONS OF A NATIONAL BOARD CERTIFIED TEACHER

DEREK MINAKAMI

STRESS AND SUBMISSION

Looking back at my efforts to prepare my portfolio for review by the National Board for Professional Teaching Standards (NBPTS), I realize how close I came to missing the deadline and falling short of my goal. If only I had spaced the work out more evenly. As it was, I literally worked up to the last minute compiling things and making furious attempts to revise the various documents. In a last minute burst, I worked for 72 hours straight, sustained by peppermints and a variety of caffeine-laced drinks. In the end, I managed to submit my portfolio just before the deadline, and with a sneaking feeling that I could have done more to show off my best work. In spite of these doubts, once I had mailed it, I felt a sense of relief, calm and resignation. If things came to the worst, and I failed to make the grade this year, I knew that there was always next year and that what I had learned about the process would help me in my quest to become a National Board Certified Teacher.

PURPOSE

Fellow teachers and friends are always curious about my motives in seeking National Board Certification, especially as it costs \$2000, and that's just to apply. People ask me, "Do you earn more pay?" My response is simple: "No. I didn't do it for the money."

Many states on the mainland do recognize the prestige of National Board Certification and provide financial incentives to teachers who are successful in obtaining it. But at the time of my application, Hawai'i was still considering these options. **

The next question is usually: "So if you don't get paid more, does it allow you to teach anywhere in the U.S.?" I'm afraid the answer to that one is also "No." The process, in effect, has nothing to do with obtaining a state license to teach. National Board Certification is designed to recognize professional or more advanced levels of performance rather than outlining minimum licensing standards.

My answers usually produce much head scratching and befuddlement. "So if you don't get paid more, and it doesn't allow you to teach anywhere in the country, why get it?" "Because it's there?" I answer, like Mallory when he was asked why he wanted to climb Mount Everest.

Actually, the task did seem quite comparable to climbing a mountain. The stress and toil of compiling the portfolio seemed, at times, an almost endless uphill struggle. In

recording the daily details and reflections, I tended to lose sight of the end point. At times, I could only hazily visualize the summit and the sense of accomplishment that I would achieve on completion. Yet, as I advanced, the benefits of going through the process of certification began to come more clearly into focus.

From the beginning, I considered National Board Certification as a means to challenge myself professionally. The process of certification involved meeting a set of demanding standards established by fellow teachers. My profession had set up a challenge—a high bar—to measure my abilities as an educator. It also offered insights into areas of teaching strength and weakness. Successful or not, I knew I would emerge from the experience a stronger teacher.

THE OUTSET

I first heard about National Board Certification in 1991 as a student in the Master of Education in Teaching Program at the University of Hawai'i at Mānoa. I must have stowed it away in the back of my mind as something I might eventually like to pursue. But for the next seven years, I heard little about it, and I didn't give it much thought. Then, in November of 1998, like all teachers at my school, I received a letter in my box from the Hawai'i Institute for

Educational Partnerships (HIEP) inviting me to apply for National Board Certification. I was intrigued and excitedly called Ann Port, one of the co-directors of the College of Education's partnership with the Department of Education. Ann encouraged me to submit an application. Her office would contact me later regarding a meeting with other candidates.

I soon received an application from HIEP and hurriedly filled it out, one step ahead of the deadline. Fortunately, I met the eligibility requirements. I possessed a baccalaureate degree from the University of Hawai'i, an accredited institution, and I had completed six years of successful teaching, double the minimum of three years that the Board required. Then, a snag occurred. I could not submit proof that I held a valid state teaching license for the previous three years as Hawaii had only replaced a certification system with a licensing system three years prior. Fortunately, my principal, Mary Murakami, helped out by submitting proof that I had taught for six years in an accredited school. Whew!

National Board Certification is designed to recognize professional or more advanced levels of performance rather than outlining minimum licensing standards.

Along with the application, I had to pony up \$500, the first installment of the overall fee of \$2000. This may seem exorbitant, especially when compared to the licensing fees of other professionals, even doctors (which range from twenty-five to a few hundred dollars). I consoled myself with the thought that it matched the cost of scoring the performance-based assessment employed by the board. Fortunately, the bite would be lessened by a 50% subsidy provided by various agencies including the Hawaii Business Round Table and the federal government.

THE COHORT

Later in December, I joined four similarly inclined candidates at the offices of the Hawaii State Teachers Association (HSTA) to learn more about the climb that lay ahead of us. I sat along

State licensing is designed to test for the minimum qualifications that novice teachers must possess when entering the profession. National Board Certification, however, is awarded only to experienced and accomplished teachers and in recognition of a mature level of professional practice.

side Dr Anne Freese, whom I had asked to serve as my advocate (NBPTS terminology for mentor or advisor). The others had brought along their advocates, too. We met with Ann Port and Phil Whitesel of HIEP, Sharon Mahoe of the Hawaii Teacher Standards Board (HTSB), and Karen Ginoza and Arlene Lee of HSTA. Mary Ann Joseph, a recent transplant to Hawaii and a successful Board certified teacher, served as our facilitator.

Karen Ginoza, President of the HSTA, welcomed us and applauded our willingness to brave the challenges ahead. She informed us that the average candidate puts in 120 hours compiling a portfolio. She reminded us that we represented Hawaii's first effort towards National Board Certification and were, in a real sense, the pioneers who would beat the path for others to follow. She offered the union's full support in our quest for this honor, including the use of laptop computers and the cost of transportation for neighbor island candidates. She also promised to help search for additional funds, which she later obtained, to help defray the application fee. Arlene Lee would serve as the HSTA's point person.

Ann Port and Phil Whitesel, co-directors of the HIEP explained the role of the Partnership in the certification

process. They shared how HIEP was a formal partnership between Hawai'i's State Department of Education and the University of Hawai'i. They pledged their support, extending promises for the use of equipment and resources as well as helping to connect us to people from the university who might offer expertise and advice.

Sharon Mahoe, executive director of the Hawai'i Teachers' Standards Board, explained the differences between National Board Certification and state licensing. National Board Certification is a voluntary process while state licensing is mandatory. State licensing is designed to test for the minimum qualifications that novice teachers must possess when entering the profession. National Board Certification, however, is awarded only to experienced and accomplished teachers and in recognition of a mature level of professional practice.

THE NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS

Sharon explained how National Board Certification emerged from the recommendations made in *A Nation Prepared: Teachers for the 21st Century* (1983), a report released by the Carnegie Corporation's Task Force on Teaching as a Profession. The report advocated the establishment of professional teaching standards and the certification of teachers who meet those standards. The NBPTS was founded in 1987 with the help of the U.S. Department of Education, the National Science Foundation, and a wide range of foundations, corporations and other private entities.

Sharon likened NBPTS to the American Bar Association or the American Medical Association. The NBPTS has a similar form and function. It aims "to establish high and rigorous standards for what accomplished teachers should know and be able to do, to develop and operate a national, voluntary system to assess and certify teachers who meet these standards and to advance related education reforms for the purpose of improving student learning in American schools." Teachers form the majority of the 63 member board of directors. The others are school administrators, school board leaders, governors and state legislators, higher education officials, teacher union leaders, and business and community leaders. Classroom teachers also contributed to the establishment of the standards and serve as assessors. Most importantly, they design and continually review a publicly acceptable and legally defensible system of certification.

Sharon described how the NBPTS assembled committees of distinguished teachers to develop standards for various certification fields, structured around developmental levels and subject area. These fields ranged from Early Childhood Generalists to Adolescent/Young Adulthood Mathematics. By 1999, the committees had already drafted standards for nineteen fields. (There are now twenty-one fields with nine more in the development phase). For each set, the commit-

tees feature particular aspects of teaching, holistic in nature and reflective of accomplished practice. They provided a narrative illustrating how the standards are exemplified and observable in the classroom. Moreover, they ensured each standard reflected the five propositions in the NBPTS policy statement, What Teachers Should Know and Be Able to Do.

THE FIVE CORE PROPOSITIONS

Mary Ann Joseph, a recently certified National Board teacher, who had only recently moved to Hawai'i with her family, was our sole contact with someone who had actually gone through the process. Mary Ann agreed to act as our facilitator and, as it turned out, she proved a valuable resource and important guide for us. In this sort of venture, it's useful to have along an experienced guide.

Mary Ann outlined the "Five Propositions of Accomplished Teaching" of the NBPTS, the principles that lie at the heart of each set of standards for each certification field. Mary Ann explained what each one meant and how we must use them to organize and structure our portfolio.

- Teachers are committed to students and their learning. In addition to believing that all students can learn, accomplished teachers regard students equitably and assure that knowledge is accessible to everyone. Teachers do this by modifying their practice and by heeding the context and cultural factors that influence student behavior.
- Teachers know the subjects they teach and how to teach those subjects to students. While many people regard subject knowledge as the most important quality of an expert teacher, they often neglect the importance of the ability to communicate, translate, and share this knowledge with students. Accomplished teachers connect subject knowledge and pedagogic knowledge to enable students to learn.
- Teachers are responsible for managing and monitoring student learning. Instead of simply presenting subject matter, skilled teachers orchestrate lessons and help to create a classroom environment that is conducive to learning. They provide a context for learning that sustains student interest. They design lessons with intent and purpose, utilizing their assessment of individual students to maximize learning. These teachers can also clearly articulate their intent to parents.
- Teachers think systematically about their practice and learn from experience. Expert teachers consistently seek opportunities to improve. They study and reflect upon their actions and make informed adjustments. They match their classroom with current pedagogical research and are willing to act as researchers with their students.

Knowing their students well, these teachers make conscientious judgments about sound teaching methods.

- Teachers are members of learning communities. Accomplished teachers are members of professional organizations, action-research groups, school committees, and curriculum teams. They work with their peers as well as parents in the interest of improving student learning. They bring the community into their classroom while exposing their students to opportunities to positively impact their community.

After we had discussed the five propositions, each of us recorded evidence that exemplified these propositions in our own practice. I scoured the nooks and crannies of my mind for examples.

THE ARRIVAL OF THE BOX

Just after Christmas 1999, a box arrived in the mail. It was from the NBPTS. I was surprised at its size. I decided to put it away and look at it after the holidays. After all, the final deadline of April 16, was enough far off.

But barely had the holidays finished when our next cohort meeting arrived. I needed to do my homework and look over the contents of the box. A quick review revealed several envelopes, a page of address labels imprinted with bar codes, a book of standards, a packet of portfolio instructions, and directions about how to repack and return the box once completed. I flipped through the standards, taking time to highlight key phrases in two of the twelve standards.

At the next meeting, we brought our boxes along, examined the portfolio requirements and did some reflective writing. I learned that despite the different certification fields, the portfolio requirements were generally similar. Each portfolio requires the candidate to complete four classroom-based exercises. Two of those areas require videotapes to be made: one of classroom interactions or discussions, and another that includes collections of certain kinds of student work. All entries were to be accompanied by a written narrative that included a description of the teaching activity, an analysis and reflection. Moreover, the narrative could be no longer than 10 pages and had to conform to strict format guidelines, including the use of specific fonts and point sizes.

The last part of the portfolio, Documented Accomplishments, focused on the candidate's work outside the classroom with families, colleagues and community. We had to show evidence of our accomplishments and relate them to student learning within their subject area. Mary Ann instructed us to concentrate on this area first as it necessitated gathering written evidence from various people, including parents, on professional activities such as workshops that we had

attended and contributions to curriculum committees.

Mary Ann also recommended that we immediately start preparing to videotape our lessons. Parents would have to fill out and return permission forms, and students needed to become accustomed to being filmed. We also had to get hold of equipment and enlist the assistance of a competent camera operator. Sharon shared a video with the group on how to videotape lessons for the portfolio.

The video had to be 20 minutes of continuous filming and to remain unedited. Student voices had to be audible and easily understood. I realized instantly that if I ran a lab, the camera could not be stationary. The camera operator would have to follow me around. She would also need to use a pressure zone microphone or its equivalent to capture the students' discussions.

VIDEOTAPING AND OTHER PITFALLS

I lost no time in making a start. Unfortunately, a number of hidden obstacles lay in wait for me. The camera was no problem. I could easily borrow one from the school. The problem was to find a pressure zone microphone. I combed Honolulu looking for one. The cheapest model I could find doubled the price that I had been quoted at the meeting. But as they were scarce there was no alternative than to buy one.

Collecting permission forms went slowly as the students demonstrated their time-honored efficiency and creativity in making elaborate excuses for not turning them in. After a week of niggling, I was ready to film. The first attempt went horribly. The camera I borrowed did not allow for an external microphone. I needed to find another one that had a jack for external microphones. Filming was delayed further.

The second attempt, with the proper camera, went even more badly than the first one. I knew that students would react to the presence of a camera. I even predicted that there would be technical problems with hearing all the students' voices. But I did not foresee that we would record no sound at all. For some reason the microphone malfunctioned. After trouble-shooting and several more attempts, I discovered that the extension cable used with the microphone was faulty.

Finally, I managed to find a cable that worked, and I began taping in earnest. But even with a reliable extension cable, the microphone proved to be inadequate for recording a whole-class discussion. I did what I should have done at the beginning and sought the advice of our school's resident audio-visual expert. He told me that we had several microphones that would be ideal for the various activities that I planned to record. I borrowed a tiny microphone designed for conferences to tape class discussions. Fortunately, my purchase of the pressure zone microphone was not entirely useless: it would be perfect for recording my interaction with lab groups.

This process of trial and error learning ate up about six weeks of precious time, and the lessons I wanted to feature in

the videotapes had already been taught. I would have to film another class and plan additional units. In addition, I still needed to write about what I had videotaped. Time was quickly slipping away.

LEARNING MAJOR IDEAS IN SMALL AMOUNTS OF TIME

While enduring the trials and exertions of getting the video camera and microphone to record properly, I began work on my first written portfolio entry: Teaching a Major Idea Over Time. I would tackle the other entries such as Active Scientific Inquiry, Whole Class Discussion, and Assessing Student Work later. Not only would I have to explain how I taught a major idea over a period of time, I would also be required to describe the context and culture of the classroom in every lesson I taught. Specifications for each entry were laid out in precise detail down to the size of the margins, the length of the narrative and font and point size.

As I struggled to write and gather evidence of meeting each standard, my writing grew muddled. Fortunately, I possessed excellent advocates in Dr. Anne Freese from the College of Education, Diane Cheung, Kailua High School's staff development specialist, and Kathy Ellwin, Kailua High School's registrar. They served as diligent readers who were always ready with valuable suggestions for improvement. Anne helped to clarify my writing. Kathy helped me to narrow my scope. Diane helped me to find focus. I took their critical advice seriously and used their comments to strengthen subsequent entries. The April deadline was rapidly approaching, and I seemed still no closer to completing my assignments.

Given the looming deadline, I made a rather rash decision. My cousin was getting married on the mainland during spring break, and I had promised to attend the wedding. I still needed to videotape one more lesson and write four more entries. But I could still keep to deadline. All I needed to do was take my journals and a laptop with me and write on the plane. Somehow, my resolution failed me and my thoughts were given over to the prospect, during my week away, of visiting one of the world's great art galleries.

With only three weeks remaining, I played catch-up by writing nightly on the laptop till 2 a.m. During the day, I finished videotaping and began to compile my evidence for the portfolio entries in the section entitled Documented Accomplishments.

With one week to go, my principal, Mary Murakami asked if I needed to take some time off to finish. I considered her offer, but I was getting close and felt confident that I could complete my work over the weekend. Unfortunately, in spite of my efforts in front of the computer, the two days slipped by with little progress. I studied my students' assignments, deliberating endlessly over which would best illustrate the effectiveness of my teaching, without picking one.

My principal's offer began to look more and more appealing. I took the rest of the week off. The days that followed literally blurred into one another. I went home from school on Monday and continued working straight until Thursday evening, completing the portfolio just in time. I even managed in my dazed state to complete the exacting directions for returning the completed documents. That night, I slept a sound and dreamless sleep, and took the next day off to recover.

Even if I had not been successful in gaining national certification, I would still have found value in the process. Others have reported the same benefits. I became intimately familiar with my teaching. I concentrated deeply upon my students and became more aware of their learning needs and of responsive teaching strategies. I opened my thoughts up to my peers and mentors for their review and advice. I put my teaching under the microscope and, as a result, realized practical benefits as a classroom teacher.

RESIGNATION AND RELIEF

With the portfolio in the mail, I felt relieved. But I had submitted it without the benefit of the comments of my advocates. At least, if it failed to satisfy this time, I could revise it gradually and try again next year. NBPTS would allow me to bank my test scores for three years, and I could resubmit any low scoring portfolio entries. It would cost me \$275. But this seemed a small price in comparison to the initial \$2000.

THE ASSESSMENT CENTER

The Assessment Center represented the last hoop I needed to jump through for certification. The Assessment Center exercises focus primarily on written responses pedagogical content knowledge questions. I took mine on a computer at the Sylvan Technology Center. The exam lasted for six hours.

Having learned my lesson on the business of composing my portfolio, I made every preparation in studying for the Assessment Center. As a physics teacher, I had applied for

National Board Certification in Adolescent/Young Adulthood Science. I was confident in my knowledge of physics, but the test would be a comprehensive one that covered a wide range of topics in the sciences. I took the month of June off, forgoing my usual stint conducting teacher workshops. Once school ended, I buried my nose into several books, studying concepts in Earth and Space Science, Biology, and Chemistry. As notes were allowed into the Assessment Center, I took an abundant set. I studied during the day and slept comfortably at night.

The Assessment Center appointment arrived quickly, and this time I was well-prepared and rested. The six hours zoomed by. I felt confident. The test was no mere multiple-choice exam. I had to design lessons and describe common misconceptions students hold about certain concepts. If anything, I wished that I had reviewed physics before taking the test.

THANKSGIVING

The results came back early. We were told that we probably would not be notified of our status until the end of the year. However, NBPTS sent an email informing me that I could expect a reply around Thanksgiving. Nothing came on the Wednesday before Thanksgiving. I would have to wait till Friday. I slept restlessly. On Thanksgiving day, the doorbell rang. Expecting no one, especially the mail carrier, I casually approached the door. My neighbor was standing there with an express mail envelope. She informed me that she had collected my mail on Wednesday before I came home. I tore it from her hands, thanking her, too nervous to open the package neatly. Inside, I found a tally of my scores. My portfolio scores were marginal. But, my Assessment Center scores were good, and enough to make up for the shortfall in the other sections. I had made it. I felt thrilled and relieved. I could hardly believe it.

DENOUEMENT

Looking back, my success was largely due to hard work and the help of my advisors and other supporters. I had placed myself under stress and was unsatisfied with portions of my portfolio. But I was also well prepared to undergo the process. I have those taught and worked with me to thank. For one, the MET taught me to reflect upon my practice and continues to help refine my teaching by involving me in their community of learners at Kailua High School. Second, my colleagues provided a rich source of support and knowledge for such an endeavor. I am surrounded by good role models, colleagues who exemplify quality teaching and generously helped me in achieving my goals. Finally, the other candidates, HIEP, HSTA, HTSB, and Mary Ann guided me through the process. I needed this supportive network; I could not have done it alone.



Top (l-r) Building polyhedra from polyhedrons; teachers judging students' work in relation to Hawai'i mathematics standards and Derek Minakami.



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Most teachers who attempt the process of certification recount similar feelings. They feel that they have honed their teaching skills. They feel a renewed sense of enthusiasm for the profession. In the end, it is their students who become the major beneficiaries of this renewal.

The NBPTS and the process of National Board Certification elevates the teaching profession as a whole. By recognizing quality teachers in every community, it raises the public's

perception of teachers, renews confidence in our educational system, and reinstates it as one of the cornerstones of our Democracy.

Derek Minakami is a graduate of the Master of Education in Teaching Program at the College of Education, University of Hawai'i at Mānoa. He is the first public school teacher in Hawai'i to receive national certification for the NBPTS. He teaches science at Kailua High School.
