E Lauhoe Mai Nā Waʻa: Toward a Hawaiian Indigenous Education Teaching Framework

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The desire to improve educational delivery and outcomes has prompted significant advancements in culture-based education as a foundation for community-driven, place-based, relevant educational approaches that more effectively engage children and their families in lifelong learning and leadership. This article shares the early process and tools of a large-scale, community-participatory project developed to understand the use of culture-based teaching strategies in Hawaiʻi and associated outcomes for students (7th–10th grade). Specifically, this work documents the initial planning and theoretical development that resulted in a Hawaiian Indigenous Education Rubric (HIER) from a teaching perspective. The HIER tool provides a building block in our efforts to understand what indigenous education looks like in the teaching environment and is shared here to encourage further research and development. Future publications will document the results of the broader project based on teacher and student data.

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The wind is slightly breezy, the sky is scattered with billowy clouds, and the ocean is peaking in swells of gentle sets. It's a perfect day for an ocean voyage. As the paddlers gather together, they bring with them their own set of experiences, talents, and strengths that will contribute to the success of the journey. First, they will *pule* (pray) to ask for strength, endurance, patience, and focus throughout the journey and to ensure safe arrival at the destination. As they place the *wa'a* (canoe) into the water, they take heed of the environment around them, the signs in the atmosphere, the wind, and the ocean conditions. The paddlers climb into the wa'a and sit quietly waiting for the call from the steersman, *"E kaupē aku nō i ka hoe"* (put forward the paddle). The time has arrived, the call to action has begun, *"E kō mai nō i ka hoe, e hoe"* (draw the paddle toward you, paddle). Now is the time. The paddlers place their mind, body, and spirit into a collective position on the goal, the destination. Together they will strive to stay on course, to be synchronized in timing and rhythm of the stroke, to *'onipa'a* (be steadfast) through the fatigue and challenge of the elements, and to stay on course and collective in their goal. *"E lauhoe a pae aku ka wa'a"* (to paddle together until the canoe lands).

And so, too, is it a journey toward a Hawaiian indigenous educational framework. As part of this immense journey there is a need to turn directly to the paddlers themselves for the many stories, the information, and diverse journeys that make up the Hawaiian educational experience. It is from within these many voices that we begin to see the alignment of school goals and practices to their outcomes; and the communities, and populations that they serve.

Momentum is building among Hawaiian indigenous educators and supporters of change to redefine education through strategies building upon a cultural framework for education. This work includes realigning educational goals, adapting classroom strategies through cultural indigenous methods and in some cases larger transformations of school ideology. It is the journey of rediscovery to reclaim an indigenous sense of well-being through the language, culture, values, and traditions; a groundswell that directs improved educational outcomes and school success for Native Hawaiians. It is the call that repositions teachers, schools, families, and communities together as they collectively work toward a common destination.

As one small piece of the journey, this article shares initial learnings from a research project about culture-based education from a Hawaiian indigenous perspective. The project arose out of ongoing discussions among educators in

culture-based settings about the need for empirical measures and information to assess progress and learner outcomes. A committee was gathered to share ideas and thoughts, leading to the larger focus of the project to describe the impact of culture-based education on the outcomes of Native Hawaiian and other school children. In pursuing the project, the research team immediately encountered a major area of struggle facing researchers in indigenous education, or any other research project for that matter, which is to define what it is that we are studying: what is indigenous education?

What is Indigenous Education?

This question seems a simple one, and it is clear that to understand the impact of culture-based education, we must be able to articulate and understand the approaches and philosophies used by indigenous educators. The benefits of doing so are critically important to the field of education; namely, to be able to promote, share, and develop culturally responsive educational strategies, learning approaches, and systems that presumably benefit all children, especially indigenous children. Perhaps even more important, however, is that we as indigenous peoples are involved with the creation, discussion, and evolution of our own definitions and methodologies; that we participate in the production and documentation of knowledge.

That said, research proposing definitions may invoke a certain tension, because in defining comes the possibility of limiting that which is being defined, in this case indigenous education and/or the ancestral knowledge systems from which it stems. In our experiences as indigenous peoples there is good reason for caution, making it even more important that we share the intent of this work and our desire to communicate it. As such, this article conveys the early work products resulting from our ongoing research project. Specifically, it outlines a definition of culture-based education used for this study and a heuristic tool describing Hawaiian indigenous education that has been validated as a reasonable starting point by various stakeholders and practitioners of indigenous education.[1] It is not meant to offer the right answer or the only answer, but is proposed as an initial step in achieving greater understanding and new viewpoints in mainstream education. We offer it

here as a useful point of departure for others engaged in similar kinds of research, program delivery, or the development of educational models. We also seek to document and share it as part of our promise to the participants involved in its creation as a community-based product. Our hope is that this model contributes to the work of others just as we have benefited from earlier scholarship and the work of those before us. Finally, our intent is that by sharing this work, we provide opportunities for further dialogue and endless new perspectives.

A Community-Based Education Research Project

This article originates in a community-based participatory research project, representing a collaborative effort of the Hawai‘i Department of Education, several Hawaiian organizations, and Native Hawaiian and other charter schools in the state.[2] The overall objective is to understand and describe culturally relevant education and its impact on students to inform the development and advancement of meaningful educational strategies.

The first step in addressing this research topic was to articulate a definition of culture-based education in the context of Native Hawaiian education. The next step in the research process was to create a framework that theoretically captures the educational approaches that might operate in Native Hawaiian culture-based settings. The guiding question was: If we were to observe teaching and learning in a Hawaiian indigenous educational setting, what would it look like? Using a community participatory process, this research yielded a rubric, which we call the *Hawaiian Indigenous Education Rubric* (HIER). The rubric was used as a heuristic tool and guiding framework to our study of culture-based education. The present article seeks to document the process of creating the tool and to share it for broader community use. Note that future publications will delve into the broader study's objectives to understand the use and impact of the culture-based educational strategies that the HIER helped frame.

A Proposed Definition of Culture-Based Education

Our definition of culture-based education emerged based on an extensive review of the literature. Mounting research documents the growth in culture-based education perspectives and practice (Aguilera, 2003; Demmert, Grissmer, & Towner, 2006; Demmert & Towner, 2003), including its positive impact in Hawaiʻi (see Kanaʻiaupuni, Malone, & Ishibashi, 2005). Studies document the educational advantages of relating to the learners' prior experiences, home language, and culture, and the need for culturally relevant pedagogy (Kawaiʻaeʻa, 2009; Ladson-Billings, 1995a, 1995b; Mohatt, Trimble, & Dickson, 2006; Osborne, 1996; Sherman, 2003; Stairs, 1994; Tharp, 2006; Yap et al., 2005).

Perhaps most simply, culture may be defined as shared ways of being, knowing, and doing. The educational literature describes the role of culture in education in various ways. Many treatments refer to cultural styles or sensitivity approaches that stress teaching respect and tolerance for other cultures and ways of learning, including staff, student, and faculty training (e.g., Gutierrez & Rogoff, 2003). Others detail the helpful strategies that teachers can use to be culturally attuned and responsive to their student needs (Gay, 2002; Castagno & Brayboy, 2008).

Our use of the term *culture-based education* is consistent with more in-depth treatments referring to the grounding of instruction and student learning in the values, norms, knowledge, beliefs, practices, experiences, places, and language that are the foundation of a culture, in this case Hawaiian indigenous culture. Culture-based education may include teaching the traditions and practices of a particular culture, but it is not restricted to these skills and knowledge. More important, culture-based education refers to teaching and learning that are grounded in a cultural worldview, from whose lens are taught the skills, knowledge, content, and values that students need in our modern, global society.

One example of how this comes together is revealed in Kawakami and Aton's (2001) research on the education of Native Hawaiian children, developed over the years through the Kamehameha Early Education Project and other programs. From their work emerges a set of culturally focused characteristics, which can be summarized as follows:

CONTEXT

- Allow for/promote cultural protocol in school.

- Integrate cultural values in school operations.

- Provide venues/sponsor events in the community that allow sharing of cultural knowledge and traditions.

- Foster participation of *kūpuna* (elders) in all aspects of education process.

MEDIUM OF INSTRUCTION

- Provide Hawaiian language immersion program.

- Offer special activities/events where participants can be immersed in Hawaiian language (e.g., Hawaiian language day, forums, chat rooms, etc.).

- Make available Hawaiian language books, resource materials, etc.

CONTENT FOCUS

- Include Hawaiian language, history, and culture classes.

- Integrate traditional knowledge with modern disciplines throughout the curriculum (e.g., astronomy and navigation).

- Use culturally based materials to enrich the curriculum (e.g., using Hawaiian stories to teach math, language arts, history, etc.).

- Promote learning about traditional stewardship.

PEDAGOGICAL STYLE

- Use traditional/culturally appropriate teaching strategies (e.g., apprenticeships, project-based learning, small group work).

- Honor and incorporate indigenous "talk story" type sessions.

PERSPECTIVE ON DATA AND ACCOUNTABILITY

- Use a variety of assessment strategies and tools.

- Include traditional/culturally appropriate assessments, such as portfolios and *hōʻike* (show, exhibit).

These categories are generally consistent with teaching guidelines proposed by Klump and McNeir (2005) for creating culturally responsive environments. These we categorize as follows:

PEDAGOGY

- Provide group-centered instruction (a.k.a. student-centered instruction).

- Link culture and school learning (linking student language, culture, values to academics).

- Approach teacher as facilitator.

- Communicate high expectations.

CURRICULUM

- Provide culturally mediated instruction (curriculum integrated with knowledge, language, culture).

- Reshape the curriculum (to include multimodal styles of learning).

PARENTS/FAMILIES

- Value parents, families, and community in the educational process.

Research by Demmert and colleagues offers a useful broad definition of culture-based education, based on a national study of native language schools, including Native Hawaiian, Navaho, Blackfeet, Y'upik, and Ojibwe. This work yielded the following definitional elements (Demmert, Hilberg, & Rawlins, 2008):

Language: Recognition and use of Native American (American Indian, Alaska Native, Native Hawaiian) languages (this may include use bilingually or as a first or second language).

Pedagogy: Pedagogy that stresses traditional cultural characteristics and adult–child interactions as the starting place for education (mores that are currently practiced in the community and that may differ from community to community). Pedagogy in which teaching strategies are congruent with the traditional culture as well as contemporary ways of knowing and learning (opportunities to observe, opportunities to practice, and opportunities to demonstrate skills).

Curriculum: Based on traditional culture that recognizes the importance of native spirituality and places the education of young children in a contemporary context (e.g., use and understanding of the visual arts, legends, oral histories, and fundamental beliefs of the community).

Leadership: Strong native community participation (including parents, elders, other community resources) in educating children and in the planning and operation of school activities.

Assessment: Knowledge and use of the social and political mores of the community.

Based on the consistencies in the research literature, we define five critical components of culture-based education (Figure 1). The look and feel of these five components vary from setting to setting, depending on cultural ways of being, knowing, and doing. Note that the components may describe any culture-based educational effort, including English-speaking cultural groups, such as commonly found in mainstream schools (because all education is culture-based, after all, including Western-based education systems).

FIGURE 1 Key components of culture-based education

Language	Recognizing and using native or heritage language.
Family and Community	Actively involving family and community in the development of curricula, everyday learning, and leadership.
Content	Making learning meaningful and relevant through culturally grounded content and assessment.
Context	Structuring school, classroom, and other learning interactions in culturally appropriate ways.
Assessment and Accountability	Gathering and maintaining data using various methods to ensure student progress in culturally responsible ways.

Toward a Hawaiian Indigenous Education Teaching Framework

Based on this broad definition, an indigenous framework was needed to operationalize culture-based teaching within the specific context of Hawaiian culture and community. The questions we asked to create the framework were twofold: what does Hawaiian indigenous culture-based teaching look like from the teacher's perspective, and what teaching behaviors might we expect to see at different levels of intensity?

The Community Participatory Process

The framework was created in community partnership comprised of a multifaceted research advisory group including a Kamehameha Schools curriculum coordinator, professors of teacher education from in-state university campuses (University of Hawaiʻi at Hilo and Mānoa), members of the Kamehameha Schools Research & Evaluation Division, ʻAha Pūnana Leo, and the Hawaiʻi State Department of Education's (HIDOE) testing and evaluation offices. A core research workgroup at Kamehameha Schools created a first draft of the rubric dimensions after conducting an extensive literature review. This draft became a working document that underwent an extensive discussion and revision process by the advisory group via many long hours over a period of months.

The results of subsequent drafts were then vetted by a leadership group representing the Nā Lei Naʻauao Native Hawaiian Charter School Alliance. This group analyzed each dimension and provided feedback and insights for revisions, in several cases also calling for complete reconceptualization of some core pieces. The Kamehameha work team went back to the table and drafted another version based on this feedback. The newly revised version was reviewed by the research advisory group, which spent long hours with each word in the rubric. From there, the rubric underwent an intensive process of validating, piloting, and revising with input from various community participants, including private school teachers at two private school campuses, teachers in several different Hawaiian medium school settings, teachers in conventional public school settings, and the Nā Lei Naʻauao Native Hawaiian Charter School Alliance leadership group.

A central agreement was that the same community also would be part of the process of sharing and interpreting the results, prior to the presentation of the results and outcomes to other audiences. The latter has occurred via PowerPoint presentations, initial tables of preliminary reports, and detailed updates to charter school audiences, and shorter updates via postcards to the 600 participating teachers and thousands of families involved. Initial teacher and student outcomes have been presented to respective groups (charter data to charter schools, private school data to private schools, etc.) for discussions about the findings and interpretations before sharing publicly. Charter school members have also been part of the presentation teams to formal audiences. Aggregate data as well as school-level data have been provided to them for their own presentations and related work. The HIDOE's evaluation and testing office has been an ongoing part of the conversation, though it has been harder to be as inclusive with the larger public school teacher group. Future efforts are forthcoming to continue to share findings with and gather input from students and public school principals and teachers.
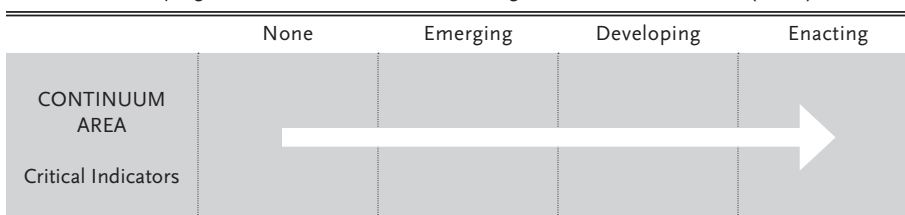
The HIER

The HIER is organized into the five components defined in Figure 1, each containing a set of critical indicators that tie directly to the experience of teachers. In turn, these indicators are attached to a series of descriptors that increase in intensity, categorized into none, emerging, developing, and enacting (see Figure 2). Both the critical indicators and corresponding descriptors are focused on behaviors to illustrate the continua of different levels of Hawaiian indigenous teaching strategies.

The first column, None, identifies practices that might be most closely associ-
ated with industrial-era education models (reflecting key descriptors such as
classroom-based, textbook-driven, teacher-focused, lecture, paper-and-pencil
tests, standardized testing, English only, Western culture, individually-oriented).
The last column, Enacting, attempts to capture a picture of fully implemented
Hawaiian indigenous education (with descriptors such as *ʻōlelo Hawaiʻi* [Hawaiian
language], community-based, spirituality, cultural values and knowledge, ʻohana
[family]-based, intergenerational, place-based, hōʻike, culturally purposeful). As is
true of most models, the enacting category is an "ideal" type, and it may not be
the case that any existing school identifies itself as enacting across all continua of
the rubric.[3]

Note that the objective of the tool is not to devalue non-Hawaiian indigenous
approaches to teaching and learning but to define and articulate teaching behaviors
and philosophies specifically from a Hawaiian indigenous education perspective.
For this reason, when the questionnaires were developed from this framework, all
items were designed to collect the frequency of *each behavior* defined within each
cell of the continua. In other words, a teacher may practice an item in the None
column not at all, sometimes, or a lot. That same teacher may use a strategy in
the Enacting column not at all, sometimes, or a lot. With this design, the resulting
tools can capture a highly individualized use of culture-based strategies.

FIGURE 2 Developing a framework: The Hawaiian Indigenous Education Rubric (HIER)

Using this framework, we can begin to describe Hawaiian indigenous education
from a teacher's perspective. The HIER is displayed in full in Table 1. In this
section we provide an overview of each continuum. The first component focuses
on language, where teachers may include very little Hawaiian language content,
use it occasionally, or employ it as the primary medium of instruction. Teachers
may range in believing that Hawaiian language has little to do with their teaching,
to feeling that some exposure to it is important, or to believing that it is central to
what they do as teachers.

TABLE 1 The Hawaiian Indigenous Education Rubric (HIER): Full detail

I. Language: Use of Heritage Language in Teaching

Critical indicators	None	Emerging	Developing	Enacting
(a) Integration of Hawaiian language in class	I do not have use for Hawaiian language in my class.	I use simple Hawaiian words and/or songs to expose my students to Hawaiian language.	I speak and display Hawaiian language in the learning environment, using phrases and simple language exchanges.	I teach and communicate with my students in ʻōlelo Hawaiʻi (Hawaiian language).
(b) Hawaiian language materials and resources (e.g., books, electronic media, audio/visual technology, kūpuna, community members)	I have no Hawaiian language materials or resources in my classroom.	I occasionally use Hawaiian language materials in my teaching.	I use Hawaiian language materials in my teaching fairly often.	I use Hawaiian language materials in my teaching all the time.
Philosophy on language	Hawaiian language is less relevant to core academic subjects like math, English, science, and social studies.	I believe it is important for all students to be exposed to Hawaiian language.	My teaching is grounded in the belief that all students should have a basic level of competency in the Hawaiian language.	My teaching is grounded in the belief that all students should be proficient in Hawaiian language to achieve our vision for a Hawaiian-speaking community.

II. ʻOhana and Community Involvement

Critical indicators	None	Emerging	Developing	Enacting
(a) Integration of ʻohana/community in curriculum	I don't expect families to actively contribute to my class or my students' learning.	I provide students' family members with information about ways they can support their child's learning at home.	I develop homework assignments and activities that require the active participation of family members.	I integrate ʻohana, community members, and kūpuna into the learning experience.
(b) Communication between ʻohana and teachers	Most of my contact with students' families occurs through open houses and school events.	I contact family members (e.g., by phone, in person, by e-mail) when their children are having problems in my class.	I frequently contact family members about a variety of student matters, both good and bad.	I work closely with ʻohana to support their children's growth and success in and out of school.
(c) Relationship between ʻohana and teachers	As a teacher, my relationship with students does not extend beyond the classroom.	I talk with my students about their home lives but maintain appropriate physical and emotional boundaries.	I invite students' family members into the learning environment to create a sense of ʻohana.	I work hard to get to know my students, their families, and their community through interactions outside of school.

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III. Content: Culture- and Place-Based

	None	Emerging	Developing	Enacting
Culture-based Critical indicators (a) Curriculum (b) Content	I use vendor-developed textbooks and materials for my class to ensure that the content and quality meet state standards or other benchmarks and guidelines.	I use readily available curricula and materials and try to interject Hawaiian or "local" examples where relevant.	I use culturally appropriate curricula and materials that include some Hawaiian cultural content.	I embed Hawaiian knowledge, practices, values, behaviors, language, and spirituality into the content and materials of my class.
Place-based Critical indicators (c) Experiential (d) Community-based (e) Place-based	I use textbook-based lectures and discussions in my class.	I use hands-on learning activities outside the classroom.	I relate my coursework and content to the local (but not necessarily Hawaiian) community and my students apply what they have learned to community settings.	I use the community as a setting for student learning that is responsive to community needs and grounded in the Hawaiian knowledge, practices, and history associated with a place.
Philosophy on culture in class	I try to keep my class neutral and free of cultural references so that no students feel left out.	I design my class to support the diverse cultural backgrounds of my students.	I incorporate Hawaiian culture in my teaching to better engage students.	My ultimate goal in working with students is to preserve and perpetuate Hawaiian culture for generations to come.

IV. Context

Critical indicators	None	Emerging	Developing	Enacting
(a) Culturally grounded context	My teaching methods and delivery have little to do with Hawaiian culture, practices, values, or beliefs.	In my teaching, I incorporate universal values, couched in Hawaiian terms such as ʻohana and *lōkahi* (unity, harmony).	I integrate Hawaiian practices, rituals, and protocol as part of the learning experience for my students.	The learning environment and daily practices of my class grow from my fundamental Hawaiian beliefs and native spirituality.
(b) Culturally relevant community of learners	I lead class discussions that give individual students a chance to be heard when called on.	I facilitate student discussions and group interactions using a free-flowing, "talk story" structure that is collaborative in nature.	I encourage students to teach and learn from each other.	I create opportunities for intergenerational learning, where students learn from each other, from teachers, and from kūpuna.
(c) Community well-being, *kuleana* (responsibility)	I define and direct my students' roles and responsibilities.	I teach my students to recognize their responsibilities and the importance of their roles.	I expect my students to recognize and carry out their roles and responsibilities on their own.	I encourage my students to initiate and lead community projects to promote greater community well-being.
Philosophy on the role of teacher	My primary goal in teaching is to improve my students' academic achievement.	I am just as responsible for my students' social and emotional growth as I am for their academic achievement.	As a teacher, building cultural identity and self-worth in my students is as important to me as increasing their academic achievement.	I am responsible for ensuring that my students have a strong cultural identity, sense of place, and academic achievement.

V. Assessment and Accountability

	None	Emerging	Developing	Enacting
Indigenous assessment Critical indicators (a) Demonstrate knowledge/skills (b) Application (c) Value to community, culture	I use multiple-choice and other paper-and-pencil tests to assess students.	I assess my students by having them engage in projects or performances that: (1) Require a range of knowledge and skills.	I assess my students by having them engage in projects or performances that: (1) Require a range of knowledge and skills, AND (2) Demonstrate a meaningful understanding of the material including the ability to problem-solve and creatively adapt knowledge to different situations.	I assess my students by having them engage in projects or performances that: (1) Require a range of knowledge and skills, AND (2) Demonstrate a meaningful understanding of the material including the ability to problem-solve and creatively adapt knowledge to different situations, AND (3) Are culturally purposeful and useful (i.e., have real value to the community and to Hawaiian culture).

The second continuum is about ʻohana and community involvement. Teachers may have little expectation of relationships with students outside the usual open house events. They may extend their contact with families to include lots of feedback about positive and negative student matters. Or they may be the ones who put significant effort into integrating ʻohana and community into the learning environment and work on establishing relationships outside of school.

The third area examines content, including culturally based curriculum and materials, place-based content and strategies, and the overall philosophy about culture at school. The continuum ranges from teachers who feel that their instruction should be kept very neutral and mostly rely on vendor-developed textbooks, benchmarks, and materials (often the case in restructuring public schools), to those who use lots of local examples and hands-on learning, to those who specifically embed Hawaiian knowledge, practices, and place into the content and/or who ultimately teach to preserve and perpetuate Hawaiian culture within the global context.

Fourth is context. Here, teachers assess whether their teaching methods have little to do with Hawaiian culture, focus heavily on academic achievement, and are largely defined and directed by the teacher. The next step in the continuum includes those who incorporate universal Hawaiian values like ʻohana and use talk story methods, and who also view social development as an important part of their job. The next level integrates some Hawaiian practices, such as *mele* (song) or *oli* (chant), encourages peer teaching and learning, and views teachers' roles to include building cultural identity and self-worth. The most intensely culturally relevant teaching strategies under the Enacting column include those rooted fundamentally in Hawaiian beliefs, intergenerational learning, student-directed community engagement, and a strong sense of *kuleana* (responsibility) for ensuring students' cultural identity and value of place.

The last continuum looks at data and accountability, primarily focusing on assessment and the purpose of education. The options range from multiple-choice tests, to assessments that involve projects or performances, to those that examine creative problem solving and knowledge application in diverse situations, and finally to assessment that looks for student learning that is culturally purposeful and valuable to the community and Hawaiian culture.

Internal Reliability and Validity

The five continua of the rubric were evaluated for internal reliability using standard procedures (see Table 2). The Cronbach's alpha for each was high, ranging from .64 to .94, indicating an adequate to high degree of internal reliability (generally, .60 is considered a lower acceptable threshold, .70 is satisfactory, and .80 is high).

Data were also collected to validate the continua against an external benchmark for standards in effective teaching, using standards developed by the Center for Research on Education, Diversity, and Excellence[4] at the University of California, Berkeley. Specifically, data on three of the CREDE standards were gathered for validation, including (a) using language across the curriculum, (b) creating joint learning activities, and (c) making connections to home and community. Canonical correlations were used to assess the relationship between the set of variables defining each HIER continuum and the CREDE set, where .30 or higher suggests a correlation of interest (see Garson 2008 for an overview). As shown in Table 2, correlations were high, ranging from .52 to .78. Together, this information provides statistical assurance that the dimensions of the rubric are internally reliable and that the types of practices being captured are consistent with universal standards of effective teaching.

TABLE 2 Internal reliability and correlation with effective teaching benchmark

Continuum	N	Raw α	Std α	Correlation with Effective Teaching Standards
Language	598	.94	.94	.52
ʻOhana and community	597	.80	.80	.74
Content	585	.78	.78	.78
Context	585	.75	.76	.75
Assessment and accountability	592	.64	.71	.58
All items combined	578	.93	.93	

Discussion: Uses and Next Steps

The HIER is but one segment in our ongoing journey to develop, theorize, practice, refine, and share culture-based educational strategies. It provides a theoretical framework based on the work of many hands and voices. Honoring community participation in the construction of the rubric was central to creating a useful tool that could be used in a variety of settings and for a variety of purposes. A few considerations include the use of the HIER

- as a guide for teachers and schools to assess against their own practices

- as a tool for aligning school and classroom practices with the school mission and outcomes

- as a framework to adapt and revise as part of a school growth plan

- as a discussion tool to assist teachers with culturally relevant strategies

- as a model to include in teacher preparation and professional development activities, including integrating cultural lenses and approaches with existing teacher development models (i.e., Danielson, 2007, and others)

- as a tool to assess changes in culture-based practice and the movement across the categories over time

- as a way to inform school-based action research projects

- as a platform for policy discussions, guiding the move toward shared indicators across Hawaiian education and community programs seeking federal funding

- as work that stimulates further research, refinement, understanding, and constructive discussion about culturally relevant teaching and education

Out of this work of many hands, several research strands were developed and put into motion. In relation to the larger project that surrounded the HIER, the tool provided a framework for the study's objectives to understand outcomes related to culture-based education. For example, based on this framework, several instruments were created to carry out the study, including questionnaires to gather input from teachers (Culture-Based Education Teacher Tool–CBETT), students (CBEST), parents/caregivers (CBEPT), and principals or heads of schools (CBEPP). The teacher and principal tools were composed of items directly from the HIER. The parent and student tools were created using participatory methods, including a team representing charter school teachers, HIDOE evaluation department, Kamehameha Schools, and university researchers in psychology, sociology, Hawaiian language, and education. These tools were validated and piloted among similar participating groups during the research process.

In addition to research instruments and data collection, the HIER has been used to frame analyses to understand the impact of culture-based education. The ongoing research has yielded a better understanding of the range of cultural strategies that teachers use in classrooms across the state (Kanaʻiaupuni, Ledward, & Takayama, 2009; Ledward, Takayama, & Kahumoku, 2008). These efforts provide much-needed information to guide program development and teacher training modules for culture-based education as research-based practice.

Related research from this project also delves into understanding a wider range of student outcomes from a culture-based perspective, including sense of self-worth, cultural identity, connections to family, and connections to community, in addition to academic achievement. These student measures arose out of a growing need from charter schools and other Native Hawaiian programs to understand student impact in a more holistic way, beyond reading and mathematics test scores. Stemming from this work are fresh developments in creating a student-level measure of cultural assets. The measure can be used to gauge growth over time from a strengths-based perspective (Medeiros & Tibbetts, 2008; Tibbetts, Kahakalau, & Johnson 2007). Together, these research developments add to the growing base of knowledge and practice that empowers us as a community, providing new perspectives and approaches to aid our journey forward as we seek to strengthen and grow our Hawaiian *lāhui* (nation).

Although the voyage is part of a longer journey that began long before us and will continue beyond the final phases of the project, additional evidence will need to be collected. This evidence will include the stories, work samples, ideas, and feedback from the multitude of participants that provide the paddling strokes that move the canoe forward through the channels and into the open ocean. These pieces will assist in describing the full picture of the storyboard as outlined in this article.

As we continue to work closer with teachers, parents, administrators, schools, and communities, a clearer understanding of the impact of culture-based education is beginning to emerge. The quest will require each member of our schools and communities to participate as that of a paddler pulling through the changing currents until we collectively reach the destination where all of our children are engaged, active, and successful learners. *"E lauhoe mai nā waʻa; i ke kā, i ka hoe, i ka hoe, i ke kā; pae aku i ka ʻāina"* (Everybody paddle the canoes together; bail and paddle, paddle and bail, and the shore is reached; Pukui, 1983). We are on the way, and as we arrive at each destination, we must tell the story of the journey from our own words and through our own ideas as indigenous educators.

References

Aguilera, D. (2003). *Who defines success: An analysis of competing models of education for American Indian and Alaskan Native students.* Unpublished dissertation, University of Colorado at Boulder.

Castagno, A. E., & Brayboy, B. M. J. (2008). Culturally responsive schooling for indigenous youth: A review of the literature. *Review of Educational Research, 78,* 941–993.

Danielson, C. (2007). *Enhancing professional practice: A framework for teaching* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Demmert, W. G., Jr., Grissmer, D., & Towner, J. C. (2006). A review and analysis of the research on Native American students. *Journal of American Indian Education, 45*(3), 5–20.

Demmert, W., Hilberg, S., & Rawlins, N. (2008). *Indigenous culture-based education rubric training manual.* Bellingham, WA: Western Washington University.

Demmert, W. G., Jr., & Towner, J. C. (2003). *A review of the research literature on the influences of culturally based education on the academic performance of Native American students.* Portland, OR: Northwest Regional Educational Laboratory. Retrieved from http://www.nwrel.org/indianed/cbe/

Garson, G. D. (2008). Canonical correlations. In *Statnotes: Topics in multivariate analysis.* Retrieved from North Carolina State University: http://faculty.chass.ncsu.edu/garson/PA765/canonic.htm

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53,* 106–116.

Gutierrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher, 32,* 19–25.

Kana'iaupuni, S. M., Ledward, B., & Takayama, B. (2009). *Ho'opilina: Teachers making meaning.* Manuscript in preparation.

Kana'iaupuni, S. M., Malone, N., & Ishibashi, K. (2005). *Ka huaka'i: 2005 Native Hawaiian educational assessment.* Honolulu: Pauahi Publications, Kamehameha Schools.

Kawai'ae'a, K. (2009). *Ka nānaina laulā o nā kaiaa'o Hawai'i: The cultural ecology of Native Hawaiian learning environments.* Manuscript in preparation, Union Institute and University, Cincinnati, OH.

Kawakami, A. J., & Aton, K. K. (2001). Ke a'o Hawai'i (Critical elements of Hawaiian learning): Perceptions of successful Hawaiian educators. *Pacific Educational Research Journal, 11*(1), 53–66.

Klump, J., & McNeir, G. (2005, June). *Culturally responsive practices for student success: A regional sampler.* Portland, OR: Northwest Regional Educational Laboratory. Retrieved April 7, 2007, from http://www.nwrel.org/request/2005june/culturally.pdf

Ladson-Billings, G. (1995a). But that's just good teaching! The case for culturally relevant pedagogy. *Theory Into Practice, 34,* 159–165.

Ladson-Billings, G. (1995b). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32,* 465–491.

Ledward, B., Takayama, B., & Kahumoku, W., III. (2008). *Kikī Nā Wai: Swiftly flowing streams—Examples of 'ohana and community integration in culture-based education.* Honolulu: Kamehameha Schools, Research & Evaluation Division.

Medeiros, S., & Tibbetts, K. A. (2008). *Ho'omau i nā 'ōpio: Findings from the 2008 pilot-test of the Nā 'Ōpio: Youth Development and Assets Survey.* Honolulu: Kamehameha Schools, Research and Evaluation Division.

Mohatt, G. V., Trimble, J., & Dickson, R. (2006). Psychosocial foundations of academic performance in culture-based education programs for American Indian and Alaska Native youth: Reflections on a multidisciplinary perspective. *Journal of American Indian Education, 45*(3), 38–59.

Osborne, B. A. (1996). Practice into theory into practice: Culturally relevant pedagogy for students we have marginalized and normalized. *Anthropology and Education Quarterly, 27*, 285–314.

Pukui, M. K. (1993). *ʻŌlelo noʻeau: Hawaiian proverbs and poetical sayings*. Honolulu: Bishop Museum Press.

Sherman, L. (2003). *Culture and language in Native American education: A national team of experts conducts exploratory work on a scientific study in culturally based education*. Portland, OR: Northwest Regional Education Laboratory.

Stairs, A. (1994, Winter). The cultural negotiation of indigenous education: Between microethnography and model-building. *Peabody Journal of Education, 69*, 154–171. Retrieved from http://www.jstor.org/stable/1492750

Tharp, R. G. (2006). Four hundred years of evidence: Culture, pedagogy, and Native America [Special issue]. *Journal of American Indian Education, 45*(2), 6–25.

Tibbetts, K. A., Kahakalau, K., & Johnson, Z. (2007). Education with Aloha and student assets. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being, 4*, 147–181.

Yap, K., Towner, J. C., Beaulieu, D., Kushman, J., Demmert Jr., W., & Tharp, R. G. (2005, April). *Preliminary study for experimental research on culturally based education for American Indian/Alaskan Native Students, option task 3: Design experimental research*. Paper presented at the Research Symposium: Institute of Education Sciences U.S. Department of Education, Washington, DC.

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NOTES

1   Note that future publications will examine the data gathered using these tools as a framework for understanding culture-based education, its use among teachers, and associated student outcomes (see Kanaʻiaupuni, Ledward, & Takayama, 2009).

2   This project is entitled the Hawaiian Cultural Influences in Education (HCIE) Study, launched in 2005 by Kamehameha Schools.

3   In the field of sociology, an ideal type is formed from characteristics and elements of the given phenomena but it is not meant to correspond to all of the characteristics of any one particular case. Attributable to Max Weber, an ideal type is not meant to refer to perfect conditions, moral ideals, or statistical averages but rather to stress certain elements common to most cases of the given phenomena.

4   For more information, see http://crede.berkeley.edu/index.html.