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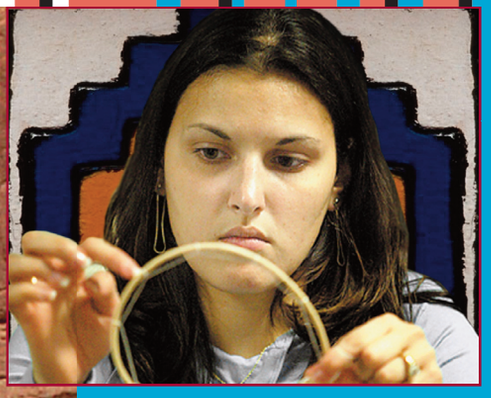


Indigenous Evaluation FRAMEWORK

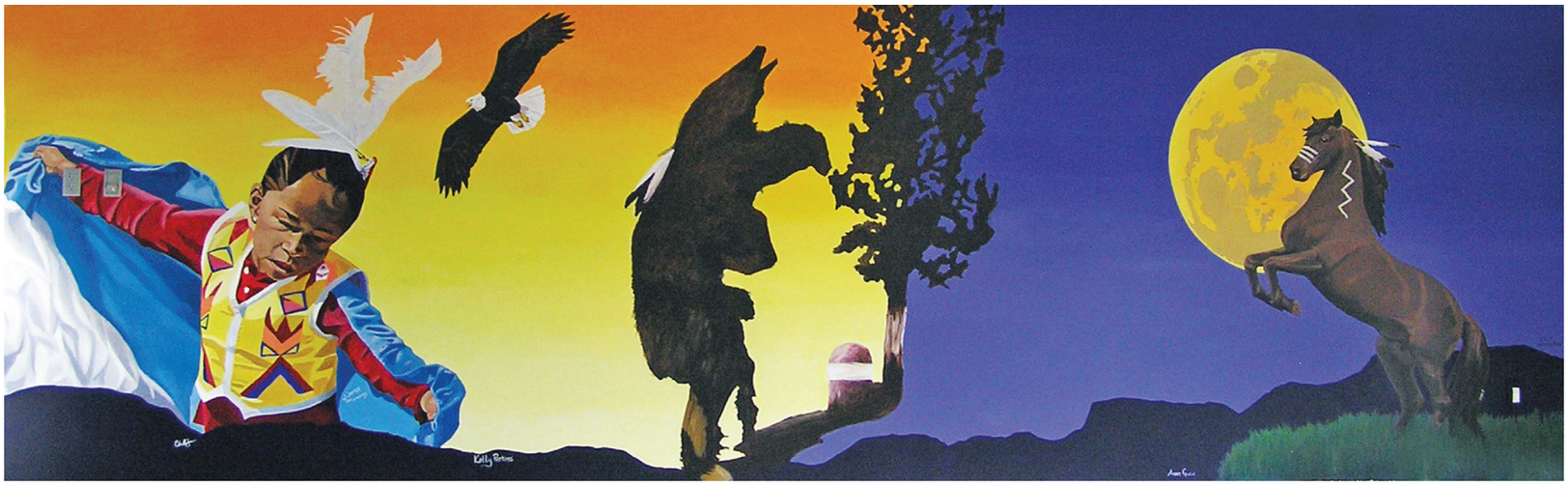
Telling Our Story in Our Place and Time

Joan LaFrance
Richard Nichols

Dedication

This book is dedicated to our ancestors from our various tribes whose values, traditions and spirits have guided our work, as well as to those individuals at the regional focus groups who through their generous giving of insights and information made this book a document that may be used for generations.

Also, this book is dedicated to future generations of Indigenous evaluators, educators and others who will strengthen the vision of Indigenous evaluation. We hope the challenge represented in that vision will help share and celebrate the stories of our Indigenous communities.



Mural by Fort Berthold Community College Students

Telling Our Story in Our Place and Time

Indigenous Evaluation Framework

Written for the

American Indian Higher Education Consortium

by

Joan LaFrance and Richard Nichols

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Framing Evaluation in Our Communities

American Indians and Alaskan Natives (AIAN) are reclaiming the education of our people through tribally-controlled colleges and universities and pre-K–12 schools and by working with educators in public schools that serve our children. Though we differ in our customs, languages, resources, and lands, we hold in common a commitment to maintain, restore, and preserve our values, wisdom and traditional pedagogies, and knowledge. Through curricula and programs designed to make learning more meaningful to tribal situations and cultures, Tribal Colleges and Universities (TCUs) and programs in K–12 schools serving Indian students are working to reverse the history of devastating educational practices that sought to remove us from our culture and that have failed to effectively teach our children.

Salish Kootenai College

Indian educators are developing innovative approaches to curricula and instructional methodologies.

In this relatively new generation of creative ventures among TCUs and tribal and public schools, Indian educators are developing innovative approaches to curricula and implementing culturally appropriate and effective instructional methodologies. Many are incorporating cultural and place-based knowledge into the curriculum and exploring Indigenous pedagogy and instructional methods. Program evaluation can be an effective tool to capture and leverage this new knowledge. Yet, according to a 2003 survey of TCUs conducted by the American Indian Higher Education Consortium (AIHEC), few teachers and faculty serving Indian students are trained in evaluation practice and many report a need for specific evaluation training (AIHEC survey, 2003). Reservation-based teachers and faculty have stated that they distrust the role of outside evaluators, worrying that evaluators are not trained to understand Indian country or the challenges faced by tribal programs. Not surprisingly, these educators feel little or no ownership of an evaluation process based on Western epistemology that ignores local culture and values.

Evaluation can provide powerful knowledge throughout Indian Country.

Good evaluation practice, when properly understood, developed, and applied, can provide powerful knowledge throughout Indian Country. This will lead to:

- Immediate improvement in specific programs;
- A knowledge base of strategies and practices that, if shared widely, will provide a rich resource for educators seeking new and tested methods for improving Indian education; and
- Ultimately, more successful education programs throughout Indian Country, including increased participation and success in higher education, and stronger, healthier, and more prosperous tribal communities.

However, if evaluation is to help us achieve these goals, American Indians and Alaska Natives need to practice evaluation in ways that reflect our values and ways of knowing. We also need to implement evaluation practices that reflect our common values while respecting our cultural differences.

Building the Framework

In the initial planning of this project, AIHEC recognized that the knowledge needed to guide an Indigenous approach to evaluation was grounded in tribal communities. Project staff asked more than 100 American Indian and Alaska Native elders and cultural experts, scientists, and educators to explore the ideas and goals of evaluation within the context of Indigenous ways of knowing about merit and worth. Much of this exploration took place in four one-day focus group discussions held in Tempe, AZ; Denver, CO; Seattle, WA; and Honolulu, HI.

AIHEC recognized that the knowledge needed to guide an Indigenous approach to evaluation was grounded within tribal communities.

In designing and implementing each of the focus groups, the project staff set the tone for bridging Western meeting formats with cultural traditions by using protocols appropriate to their own tribal practices. The meeting rooms were prepared by smudging with sweet grass to purify and clear the air. Prior to the discussion, each focus group participant was given an offering of tobacco as a token of respect for the wisdom that he or she was asked to share with us. Gifts of traditional foods from the cultures of the staff were also shared to thank participants for their contributions to the discussions. Although questions were developed to guide the focus groups, the discussion did not follow a linear question and answer format. Rather, the conversation flowed in a holistic manner as participants shared ideas and explored traditional values, described these values in their tribal languages, reflected on education, and discussed their views regarding evaluation.

Fond du Lac Tribal and Community College

Once the major elements of the Framework were identified, staff piloted the ideas and implications for evaluation at seven TCUs and one elementary school. These pilot meetings provided venues for testing the Framework. Further, presentations at the World Indigenous Peoples Conference on Education in New Zealand (2005) and at both

WIPCE Conference, Stoney Reserve, Alberta, Canada

American and Canadian Indian education and evaluation conferences helped in confirming the emergent concepts. Literature by Indigenous peoples from the United States, Canada, and New Zealand has also informed and influenced the curriculum.

Our discussion of an Indigenous Framework for evaluation draws primarily from the values, knowledge, and histories of tribal people in the United States. However, our use of the term Indigenous includes members of American Indian tribes, Native Hawaiians, Alaskan Natives, First Nations, and Aboriginal peoples of Canada and the Pacific Islands whose wisdom has contributed to this Framework.

The discussion of an Indigenous Framework for evaluation draws primarily from the values, knowledge and histories of tribal people in the United States.

Guiding Principles of the Framework

The field of evaluation draws heavily on research methodologies. This close connection is problematic to many American Indian people whose tribes and families have suffered from a long history of intrusive studies by anthropologists and other researchers that brought little more than exploitation and the loss of cultural ownership to Indian people. Many stories were told in the focus groups of ways in which evaluation had been used in the past to justify claims of program failure and to take away resources. However, we now use research for our own ends, and evaluation can also respond to our agendas for change.

In developing an Indigenous Framework for evaluation, we are guided by the following principles:

- American Indian tribes have ways of assessing merit or worth based on traditional values and cultural expressions. This knowledge should inform how evaluation is conducted and used in our communities.

- Indigenous framing for evaluation incorporates broadly held values while remaining flexible and responsive to local traditions and cultures.
- Responsive evaluation uses practices and methods from the field of evaluation that fit our needs and conditions.
- By defining evaluation, its meaning, practice, and usefulness in our own terms, we take ownership. We are not merely responding to the requirements imposed by Western practices.
- Evaluation should respect and serve tribal goals for self-determination and sovereignty.
- Evaluation is an opportunity for learning from our programs and effectively using information to create strong, viable tribal communities.

"We, as tribal people, want research and scholarship that preserves, maintains, and restores our traditions and cultural practices. We want to restore our homelands; revitalize our traditional religious practices; regain our health; and cultivate our economic, social, and governing systems. Our research [and evaluation] can help us maintain our sovereignty and preserve our nationhood."

Cheryl Crazy Bull, 1997

The framing process is a journey that each community undertakes in developing the approaches to evaluation that fit its cultural and contemporary situations.

Native American Week, Chief Dull Knife College

Training Goals

The goals of the AIHEC Indigenous Evaluation Training Workshop are to:

1. Explore how core tribal/Indigenous values should influence our approach to evaluation practices;
2. Build capacity for conducting evaluations that are responsive to our context and communities; and
3. Assess which components of Western evaluation practice can be useful in meeting our goals for evaluation.
4. Discuss the balance between our Indigenous knowing and Western evaluation practice, and contribute to the discourse on evaluation theory.

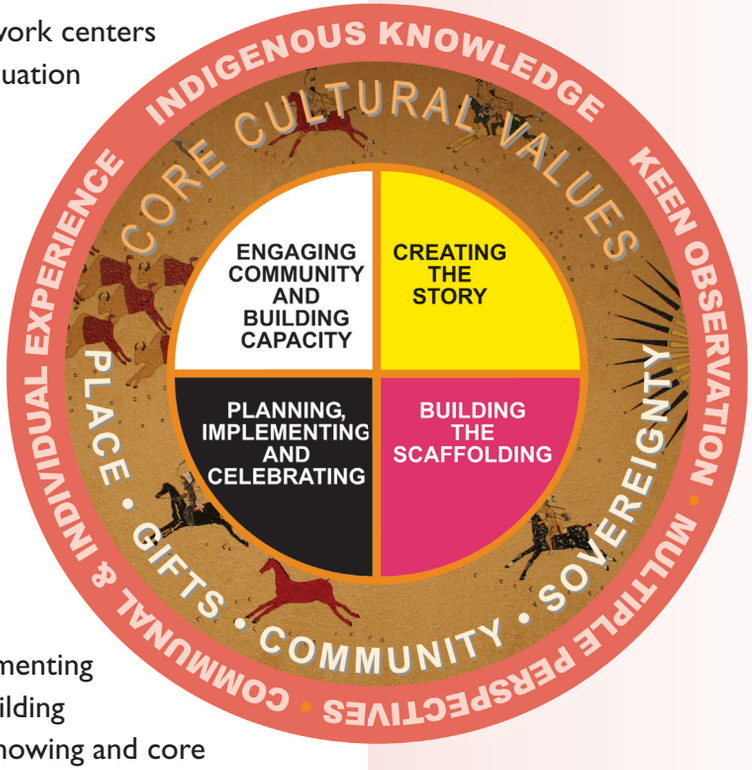
We want to center evaluation within our cultural norms, then look at methods appropriate for our situations. In taking ownership of evaluation and conducting it from an Indigenous framing, we may choose to use methods that are appropriate to our own tribal ways of knowing and which are not within the normal practice of Western evaluation. However, some of the methods we may choose are common to Western evaluation and research practices. During the training, we will discuss various Western evaluation methods that may fit within an Indigenous framing and explore strategies for adapting these methods to our contexts. On this journey, we will:

- Discuss Indigenous ways of knowing—our epistemologies for explaining the world.
- Explore cultural values and connect these to evaluation practice.
- Identify ways to include community in the evaluation in the process.

- Enter and create our story—gain a full understanding of the story we intend to tell through evaluating our program.
- Learn how to assess the story as it unfolds—explore questions that can guide us and strategies for seeking answers through responsive evaluation design and methods.
- Consider how to best collect data to understand the ongoing story of our program.
- Identify ways to celebrate the story of the evaluation to the community as well as to funders.

Model for the Indigenous Evaluation Framework

The AIHEC Indigenous Evaluation Framework centers evaluation in traditional ways of knowing. Evaluation leads to new knowledge, so our own epistemologies—our ways of knowing are essential to our evaluation practice. We also need to embed evaluation within cultural values. The Framework identifies four core cultural values that influence approaches to evaluation in Indigenous communities. Once we center evaluation in our values and ways of knowing, we can adapt and implement Western evaluation practices.



The model illustrates how the essential elements of evaluation practice (Creating the Story, Building the Scaffolding, Planning, Implementing and Celebrating, Engaging Community and Building Capacity) are guided by Indigenous ways of knowing and core cultural values.

How to Use These Materials

Although our primary focus is educational evaluation, and more specifically evaluation of STEM education, this workbook, including the resources and articles, present a general framing for an Indigenous approach to evaluation. The approach described is applicable to all types of programs in Indian Country, including community-based health and human services programs, government sponsored programs, and others.

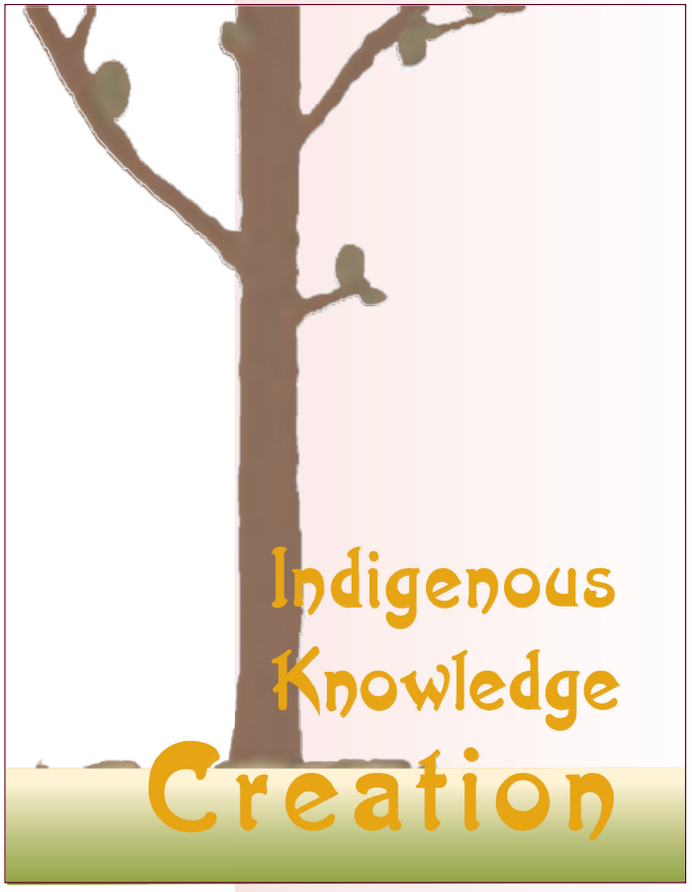
We believe that there are many entry points into this Framework, and we anticipate that each person and community will use the material in different ways. We offer a number of suggestions, resources and worksheets to assist in applying the Framework. We have built our metaphor for evaluation and created connections from one section to the other.

Outline of the Sections

The *AIHEC Indigenous Evaluation Framework* manual is organized in the following eight sections:

1. **Weaving the Basket:** Describes the role of metaphor as a traditional teaching device and explains the metaphor for the Framework.
2. **Creating Knowledge:** Explains the relationship between evaluation and knowledge creation and explores traditional ways of knowing or creating knowledge.
3. **Core Cultural Values:** Grounds evaluation within core cultural values common in American Indian and Alaskan Native communities.
4. **Engaging Community in Evaluation:** Describes different dimensions for community participation and engagement in evaluation.

5. **Creating Our Story:** Describes how to construct the program story, develop a conceptual model, and select questions or evaluative statements to guide an evaluation, the final telling of the story.
6. **Building the Scaffolding:** Describes how to design an evaluation to capture multiple perspectives and to assess change.
7. **Responsive Information Gathering:** Provides advice to consider when gathering data and conducting assessments.
8. **Planning, Implementing and Celebrating:** Describes how to construct an evaluation plan, interpret data, and celebrate learning.



During the workshop, hands-on exercises will help participants apply aspects of the Framework. Activities and scenarios, which may be used with the exercises, are in the Exercise section.

The framing process is a journey that each community undertakes in developing approaches to evaluation that fit its cultural and contemporary situations. In presenting the Framework, our goal was not to provide a How To manual for Indigenous evaluation, but rather this initiative offers a guide for a journey with suggestions and recommendations; however, the final destination will be determined within each community.

Reference

See Resources and Readings for examples, relevant papers and articles that relate to elements of the Framework.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Weaving the Basket

Our elders teach us important life lessons through the use of metaphors, symbols and stories. We wanted to honor this practice and we wondered:

Are there metaphors to explain the concept of evaluation?

A member of our advisory committee, Dr. Eric Jolly, gave his grandmother's story about basket making and while weaving a basket, he told the story. With his permission, we use his **basket making story** as a metaphor for Indigenous evaluation:

> Among the Cherokee, the making of a basket is a journey through which lessons are learned about life and spirit. The making of the basket begins by interweaving two pairs of thin honeysuckle vines into a square or cross; this forms the base of the basket. This squared cross symbolizes the four directions and the four elements of all Creation: the Great Spirit, mother earth and her gifts, animal life, and all humanity. On the journey of life, this represents the beginning of spiritual awareness.
>
> Additional pairs of vines are woven, and together with the original crossed sets of vines, they begin to form interwoven triangles that give shape to the basket. This interconnectedness symbolizes a deeper awareness—the working together of the Great Spirit with all humanity, the earth and animals.
>
> The basket maker continues, weaving in more vines to form a set of concentric circles. This represents an even higher level of spiritual awareness: the interconnection of all things with the Creator. We are all related and one with the Creator.
>
> As the basket maker continues weaving, the basket forms an inner wall interlaced with an outer wall. It is the tension between these two walls that gives strength to the basket. For the basket maker, this strength from the tension between the two walls also gives the basket its integrity—for a strong basket is a useful basket.

The interconnection within all life and the spirit world is a fundamental principle for the framing of Indigenous evaluation.

Eric Jolly and Karen Kirkhart

Cherokee Basket

The integration of program implementation with evaluation contributes to integrity, or truth making.

Using this metaphor as a way to view evaluation, we see the program as a journey of learning. The inner wall of the basket is program implementation; the outer wall is the evaluation. Together these two combine to form a tension that enables the program to learn, improve, and strengthen.

In basket making, it is important to have balance all around the basket. The basket maker must continually turn the basket as he or she works to inspect for balance and evenness.

Similarly, by looking at our programs from multiple perspectives through evaluation, we also seek to create a more perfect product: one that balances our understanding of how goals connect to activities and results. In this sense, the evaluation focuses on learning throughout our work. We continually examine as we create and implement the program. We do not wait until the end of the program to conduct the evaluation. We must continue to look at our programs as they unfold so that we can render judgment and make decisions about how to ensure that the program is successful.

As we watched Eric making the basket, we saw that the honeysuckle vines had been soaking in a bucket of water and he worked them while they were still wet. This provided flexibility to the materials so that they could be easily woven.

Indigenous evaluation also must be flexible so as to ensure responsiveness to differences among tribal cultures and situations. Further, in an Indigenous framing, the tools or materials we use in evaluation must be thought through before the implementation. In this way, evaluation becomes part of the process of program implementation.

As Eric wove the basket and continued his grandmother's story, we realized that the journey of the basket does not begin with the weaving, or even the soaking of the vines. The journey began much earlier.

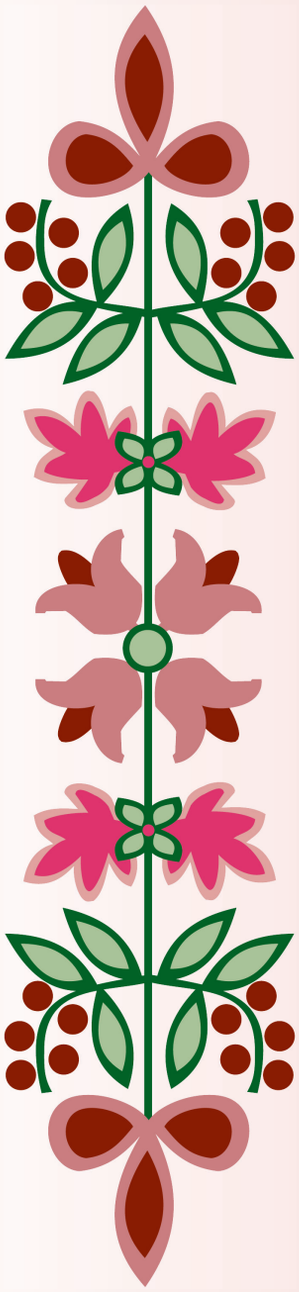
The basket maker must learn which types of materials to collect (in this instance, honeysuckle vines) and when to collect them (only at certain times during the year when the young vines are most pliable). Then, the materials must be prepared in a certain way. For example, they are soaked in water and dyed in certain natural colors that are tied to the materials available in that place and have special meaning. For some tribes, the colors represent the four sacred directions; for other tribes, they may have other associations.

Eric Jolly and Karen Kirkhart

In many tribal cultures, special songs are integrated into the work being accomplished. For the Cherokee, basket making has a long history, rooted in the culture of the people. When the Cherokee were in the Southeast, they sang certain songs in the collection and preparation of the materials. These songs were appropriate and relevant to the place, environment, and their relationship with that place. Those songs did not work anymore when the people were removed to a new place, Indian Territory, or what is now known as Oklahoma. New songs, or protocols, had to be developed that were appropriate for the new place and new relationship.

Institute of American Indian Arts Students

Indigenous evaluation, when conducted in a tribal community, is rooted in the culture of the people. The evaluation is responsive to the history, needs, and dreams of the people participating in and being affected by the program being evaluated. Culture and context are integral elements of Indigenous evaluation.



The Power of Metaphor

> The elders said, "We get scared when people bring us thick reports that are bound together and have tabs on them. We're frightened to open it because it's an evaluation of our tribe or our program. But somebody spent a lot of time doing this evaluation, so that's what we have to look at. Educated people are impressed by those thick reports. So their symbols must be that. You know, they must really like to write these thick reports. Some of us say that they write their reports in too small letters because we can't read them, and we get a headache by the time we get a little ways into it."
>
> The elders pose questions back to me. They ask: "We're giving you our traditional symbols and metaphors; what are some of the things that you use, that mean evaluation to you?"
>
> Focus Group Participant, Seattle

In Indigenous communities, knowledge is seen in very practical terms. People ask: "How can it help us or help our community?" Thus, knowledge creation must be framed in practical terms. One way to do this is to use cultural metaphors. Often these metaphors take the form of artifact. Just as we have used the basket making metaphor to give the concept of Indigenous evaluation grounding in cultural values and protocols, as Indigenous evaluators, we can use metaphor to build a vision of how evaluation can assist our tribal communities.

An Ojibwe evaluator in Canada, evaluating a health care program in a Native community, framed the evaluation within the cultural

metaphor of the **tree of life**. This was a particularly relevant and culturally appropriate way of framing the program evaluation and it had strong resonance with her community stakeholders (project partners).

A focus group participant, who had been conducting research for her dissertation, noted that in her discussion of evaluation with elders in her community, she would use the analogy of traditional objects—such as a pipe or a drum—as indicators of standards. She noted that when elders look at traditional objects, they immediately recognize the quality of work that goes into the object's creation. Certain standards tell the elders that the object is of good, solid quality, that the person who made it knew what she was doing, and that she had followed the proper protocols (for example, demonstrating respect for the materials and offering prayers for guidance).

In applying this discussion to evaluation, a focus group participant suggests asking:

> What if we apply this to how tribal members evaluate their life? They can really start understanding what we're looking for. It's a way of helping them make that leap of faith to say, "We're talking about the same thing" . . . I will tell a person that it is like looking at a beautifully made drum: "They took the time to put it together, and we don't have to worry. It's going to last us a long time." That's the kind of evaluation we're trying to get at, to capture in this process.

The CIRCLE (Comprehensive Indian Resources for Community and Law Enforcement) Project article describes a critical juncture in the second year of a cross-agency's justice program within a Lakota community in South Dakota. Guided by the evaluators, the project partners cast the project's goals as nation-building and Indigenous knowledge recovery (to rebuild the Tribal Court and its associated institutions to reflect community needs and culture). In searching for

Reference

See Readings, article on CIRCLE Project.

culturally resonant phrases to capture the nature of the project and its goal, several Oglala Lakota terms were considered. Project stakeholders settled on the term *tiyuwosla icupi* (raising the tipi).

Raising the tipi is particularly laden with symbolism and meaning, as it incorporates cultural teaching, family responsibility, and tribal duty. Raising the tipi—making a home—is accomplished with relatives. It is done with care and relevance, skill and teaching, and patience and knowledge. . . . the phrase additionally symbolizes the importance of education, boundaries, respect, family, living together peacefully, and love.[1]

Native American Week, Chief Dull Knife College

In a Tewa community in New Mexico, the evaluation of a Native language preservation program is being framed within the context of pottery making. Pottery making is a skill that goes back innumerable generations within the community:

Every single day the people . . . live with pottery, with clay—with the earth. Both consciously and unconsciously, we continue, on a daily basis, to reaffirm our connection—our dependency—on the *nung* (clay, earth, dirt). In the past, our dependency on the *nung* was intense because we farmed the earth for food, we formed the clay for cooking, storing and ceremonial vessels, we colored our bodies with clay for dances and ceremonials, and we built our houses out of the mud—the *nung*. Our lives were intimately intertwined with the earth. . . . Our present lives here are changing. We build different kinds of houses, our ceremonies are not as frequent, and our pottery is not used for cooking or storing food. . . . Are we a different people? In some ways we are—

[1] Robertson, P., Jorgenson, M., & Garrow, C.; (2004) Indigenizing Evaluation Research; *American Indian Quarterly,* vol. 28, nos. 3 & 4, p. 506-507.

but, our daily interaction with the clay reminds us of the pottery making tradition to which we belong and which stretches back almost 2,000 years.[2]

Dried clay is dug from the earth on the reservation and mixed with a temper of volcanic tuff (ashy sand). The tempering agent performs an important function in pottery making. By modifying the stickiness of the raw, wet clay, the temper makes the clay more pliable and easier to handle. It also controls the drying and shrinkage of the vessel, eliminating cracking and distortion of the unfired work, and during the process when the vessel is fired, it reduces further shrinkage and warping.

The evaluation work group for the language program is using the metaphor of the temper as a way of reinterpreting the role of evaluation as the program takes shape. It is shifting from viewing the evaluation as only a summary of a three-year federally funded project, to using the evaluation as a long-term planning process for language restoration. Evaluation is one of the tools ultimately used to strengthen the community's cultural foundation. By looking at lessons learned through the evaluation of the federal project, the work group realized that the federal program is only the initial step of what may be a 25-year journey to restore the language to its 1960s level.

In the beginning, a potter has no idea what the final work will look like. Some potters say that the clay has a mind of its own and that this is most noticeable when trying to make a very specific shape for a special order or commission. They say that the clay will not always be molded to the potter's wish. Likewise, the Tewa language project participants do not know what the end result of the journey will be, but the stakeholders view the evaluative process of learning as a journey worth taking to preserve their language.

Darlene James, Institute of American Indian Arts

Santa Clara Pottery

[2] Quote from the Forward by Rena Naranjo-Sentzell, *Pottery in Santa Clara: A Photographic History of Pottery in Our Community*, Cultural Preservation Program, Santa Clara Pueblo, May 1993.

FRAMEWORK

Weaving the Basket

Creating Knowledge

Historically, Indian people and their institutions have faced vast political, social and economic challenges. However, as resilient peoples, we have never forsaken our cultures, languages, beliefs and values.

Accordingly, tribes devise programs and projects that draw from core understandings—for example, many complex programs integrate both language and culture with schooling and academic development. In developing programs, we seek guidance from our respective cultures and values. Evaluation of our programs should also look to our Indigenous ways of knowing to guide our work.

Fort Belknap College Language Camp

Testing Our Understandings

From an evaluation perspective, in developing programs, we are essentially making a set of understandings. That is, we have reason to believe that a certain combination of activities, staffing, and resources will produce a set of expected outcomes. In other words, we have an understanding that if we do A (the program), we will get B (the results or program outcomes we want to achieve). Our set of understandings is similar to a hypothesis. As the program is implemented, we will discover whether or not our understandings are correct. Implementing the program is similar to testing the hypothesis; evaluation is the process used to learn whether our assumptions are correct that doing "A results in B."

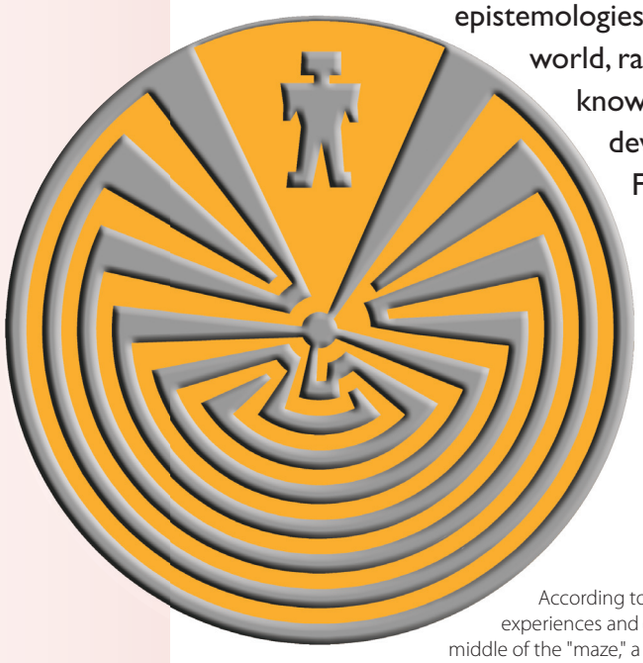
In the Western tradition, testing a hypothesis is an aspect of knowledge creation. Testing a hypothesis is research. Although we may not see ourselves as researchers, in many ways, we are: as developers, implementers, and evaluators of programs.

An important principle in the Indigenous Framework is the recognition that evaluation is integral to the program. Just as the basket weaver creates the inner and outer walls simultaneously, evaluation should be woven into the program from its inception so that it is carried on throughout its implementation.

Evaluation is the means by which we arrive at an understanding of the program to determine what works, why, and provides a full description of what happened.

Let's go back to the basket metaphor. As the tension between the inner and outer walls of the basket gives it strength and integrity, evaluation linked to implementation provides the knowledge needed to produce strong programs that address the challenges facing our schools and communities. An important principle in the Indigenous Framework is the recognition that evaluation is integral to the program. As the basket weaver creates the inner and outer walls simultaneously, evaluation should be woven into the program from its inception so that it is carried throughout its implementation.

Another principle is that evaluation is knowledge creation. Indigenous evaluation should be based on our traditional epistemologies or ways of knowing about the world, rather than Western conceptions of knowledge creation. A first step in developing an Indigenous Evaluation Framework is to understand our own ways of explaining what is known. In Western parlance, these are known as epistemologies.



According to O'odham oral history, the labyrinth design depicts experiences and choices we make in our journey through life. In the middle of the "maze," a person finds their dreams and goals. When one reaches the center, we have one final opportunity (the last turn in the design) to look back upon our choices and path, before the Sun God greets us, blesses us and passes us into the next world.

Indigenous Ways of Knowing

In the basket weaving story, one of the first lessons is that all things are connected and cannot be separated from each other. In tribal ways of knowing the world, there is a profound sense of relationship and recognition that all creation possesses spirit and energy. Indigenous scholars have written extensively of the epistemologies that inform our sense of science (one aspect of knowledge creation) and our ways of interpreting the natural and spirit world.

Student Senate President Andrea Simons Making a Parflesche Design, Fort Peck Community College

Foundations of Indigenous Knowledge Creation

Increasingly, Indigenous scholars are discussing Indigenous knowledge as it is viewed and experienced within a non-Western way of knowing. Marlene Brant-Castellano, (Mohawk of the Bay of Quinte Band in Canada) describes three over lapping categories of Aboriginal knowledge:

- **Traditional Knowledge**: handed down through the generations—creation stories, origins of clans, encounters between ancestors and the spirit world. This knowledge can also be based on the history and experiences of the people. This knowledge reinforces values and beliefs.
- **Empirical Knowledge**: gained through careful observation from multiple vantage points over extended time.
- **Revealed Knowledge**: acquired through dreams, visions and spiritual protocols.[3]

Northwest Indian College Art Show

[3] Brant-Castellano, M., "Updating Aboriginal Traditions of Knowledge," in *Indigenous Knowledge in Global Contexts: Multiple Readings of Our World*, G. J. Sefa Dei, B. L. Hall, D. Goldin-Rosenberg (Eds.), University of Toronto Press, Toronto, 2000, (adapted from list on p. 23).

Ninn nas taa ko (Chief Mountain), Blackfeet Reservation

Vine Deloria (Standing Rock Sioux) noted that: **"The old people experienced life in everything."** In his essay, "If You Think About It, You Will See It Is True," he explains that knowledge itself has life and moral purpose. The energy or spirit permeating throughout the universe forms connections and "participates in the moral content of events, so responsibility for maintaining the harmony of life falls equally on all creatures."[4]

He further explains:

> The old Indians were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if it is to be useful, was directed toward that goal.
>
> Absent in this approach was the idea that **knowledge existed apart from human beings and their communities**, and could stand alone for 'its own sake.' In the Indian conception, it was impossible that there could be abstract propositions that could be used to explore the structure of the physical world.
>
> Knowledge was derived from **individual and communal experiences in daily life**, in **keen observation of the environment**, and **interpretive messages that they received from spirits in ceremonies, visions, and dreams**.[5]

Indigenous knowledge relied on interpreting our experiences of which all are valuable:

> We cannot 'misexperience' anything; we can only misinterpret what we experience. Therefore, in some instances we can experience something entirely new, and so we must be alert and try not to classify things too quickly.[6]

In his book, *Native Science: Natural Laws of Interdependence*, Gregory Cajete (Tewa), a Native scholar who writes about

[4] Deloria, Jr., V., *Spirit and Reason: The Vine Deloria, Jr., Reader*, Fulcrum Publishing, Golden, CO, 1999, p. 49 & 52. (emphasis added)
[5] Ibid, p. 44.
[6] Ibid, p. 41.

Indigenous ways of knowing, explains that Native science (i.e., Indigenous knowledge) is related to what Western science calls environmental science and is based on **participation with nature**:

> Participation provides the grounding for the way of Native science at all levels and in all expressions. The dynamics of this participation are founded on an ancient human covenant with plants, animals, the forces of the earth, and the universe. It is the depth of our ancient human participation with nature that has been lost and indeed must be regained in some substantial form in modern life and science. The cosmological and philosophical must once again become 'rooted' in a life-centered, lived experience of the natural world.[7]

When we shake hands in greeting and departing, we are achnowledging our relationship with one another.

Albert White Hat, Sr. (Lakota), a language and cultural scholar, described how this relationship with the natural world is embedded in Native languages. He also reminded us about the moral and ethical uses of knowledge and the need for balance in all aspects of our life. In Reading and Writing the Lakota Language, he further elaborates:

> Elders reminded us that the language is *wakan* (very powerful). We use it to communicate with the other nations: the Deer Nation, the Eagle Nation, the Buffalo Nation, and so forth. We talk to the *wamakaskan* (living beings of the earth) through spiritual communications. Language must be taught with this in mind. Second, when teaching the language to younger people, both its good and evil powers must be taught. If you teach only the good, children will be ruined when they become adults. They need to understand that language contains great power. It can be used to injure a person's feelings or to compliment their achievements. It can be used with evil intent or to honor and bless. **Young people need to understand that language contains the power to give life or take it away. As a result, it must be used respectfully.**[8]

[7] Cajete, G., *Native Science: Natural Laws of Interdependence*, Clearlight Publishers, Santa Fe, NM,1999, (paraphrased from his list on p. 4-5).
[8] White Hat, Sr., A. , *Reading and Writing the Lakota Language*, The University of Utah Press, Salt Lake City, UT, 1999, p.4. (emphasis added)

Coming-to-Know Process

Gregory Cajete notes that most Indian languages did not have a word for education. Rather, learning was expressed as an active coming-to-know process, emerging as a journey of observing, experiencing, and interpreting.

> Knowledge in the Western world is sequential and builds on previous knowledge, but in Native traditions, guides or teachers are necessary. Building on prior learning and traditions is never a direct or linear path. Instead, Indigenous science pursues a meandering path around things and over obstacles, in a roundabout way. In the Western mind-set, getting from point A to B is a linear process. In the Indigenous mind-set, arrival at B occurs through fields of relationships and establishment of a sense of meaning, a sense of territory, a sense of breadth of the context. The psychologies of thinking and approach differ. [9]

From an Indigenous perspective, all of us as a community of learners become creators and co-creators of our knowledge. This same process is relevant for Indigenous evaluation, it is as a coming-to-know.

Manulani Meyer, a Native Hawaiian philosopher, outlines nested layers of knowledge that illustrate the creation and co-creation involved in coming-to-know. She notes that the lowest and smallest layer is the objective truth—observable facts of what we see.[10] However, this truth is understood only by our interaction with the observable, by what is known through our subjective relationship with the world, or the subjective truth. This subjectivity is our experience and relationship with the world.

Nested Layers of Knowledge

[9] Cajete, G., *Native Science: Natural Laws of Interdependence*, Clearlight Publishers, Santa Fe, NM,1999, (paraphrased from his list on p. 79).
[10] Based on "Energy, Knowing and Disciplining the Mind," an unpublished paper by Manulani Meyer, and personal conversation with the author in 2005.

The final layer in which objective and subjective truth is contained is culture, a transformative truth in which we make sense of the system in which we are engaged. In this framing of knowledge, subjective truth is on a higher plane than objective truth. This view supports the Indian conception described by Vine Deloria (previously quoted):

> Knowledge was derived from individual and communal experiences in daily life, in keen observation of the environment, and interpretive messages that they received from spirits in ceremonies, visions, and dreams.

"Knowledge was derived from individual and communal experiences in daily life, in keen observation of the environment, and interpretive messages that they received from spirits in ceremonies, visions, and dreams."

Vine Deloria, 1999

Often, the opposite is true in the evaluation methodologies we are asked to undertake by funders. In Western construction, often the objective truth is placed on a higher plane and it is assumed that this truth can be extracted from context and setting. We reject that notion. This is not to argue that some aspects of methods based on this objective framing cannot be used when we evaluate, but in their use, we do not accept the assumption that knowledge can be objectified or extracted from its setting and our relationship to the setting.

Deloria writes that knowledge and methodology from the Lakota and Western scientific perspectives appear to be at opposite ends of the spectrum with Western methods being the extreme of objectivity and the Indian view representing the extreme of subjectivity. He argues that there may be a middle ground between these two; however, he maintains that whatever knowledge is called forth in this middle ground requires a moral grounding.

Oglala Lakota College Nursing Graduates

A Living Entity

In keeping with the living universe, knowledge itself is a living entity. As a living entity, knowledge is connected with the breadth of

experience that crosses dimensions of reality. It engages with the physical as well as the spirit world and with the world of our ancestors. We must recognize that what we come to understand as Indigenous knowledge does not always connect to Western conceptions of reality as something that is observable and measurable. Ceremonies and cultural protocols connect us to the spiritual elements of our surroundings as well as to ancestors whose energy is still with us. As program implementers and evaluators, we honor these inter-relationships through thoughtful use of our own protocols for ceremony, blessings, and celebration.

The multi-dimensional aspect of Indigenous knowledge and its contrast with Western thinking is illustrated by a story told by a focus group participant. The following story reminds us that in considering and implementing Indigenous evaluation, we have to acknowledge and embrace our traditional knowledge.

We, the Tlingit, have a concept, *Haa Shagóon* and *Haa Shuká*, that refers to our ancestors and to those who will come after us. We acknowledge that our ancestors are also animals and other wildlife. This ideology affects the way we see and interact with the natural world. For example, we have a special relationship with *Yéil* or Raven whom we recognize as both a benefactor and sometimes a trickster. One day I was driving to school thinking about my class in which I would be talking about oral traditions. Suddenly, *Yéil* flew in front of my car. If another Tlingit had been with me, we might have made some joke about Raven, but instead I thought to myself, how do I look at Raven? Instead of seeing him as a supernatural being, I tried to think of him in biological terms. I almost became physically ill trying to think of him in this way. It really hit me. I hadn't realized the impact of Western knowledge. I was unable to reconcile my traditional view of Raven with that of Western knowledge.

Implications for Framing Indigenous Evaluation

In their article, "Indigenizing Evaluation Research," Robertson, et al., noted that on the Pine Ridge reservation in South Dakota, tribal spiritual leaders explained to an evaluation team that the Lakota always engaged in evaluative activities. They use the word *wopasi* (inquiry) to describe evaluation. Related to this is the phrase *tokata wasagle tunpi* (something you set up to go into the future). A Menominee who participated in a focus group explained that in his language a translation of the concept of evaluation would be similar to "tomorrow you will know what you learned today."

Red Lake Drum Camp

Indigenous epistemology influences the Framework for Indigenous Evaluation in a number of ways.

- Although we care about how well a proposed program meets defined goals and objectives, we recognize that it does not operate in a vacuum—it works in relationship with many factors within its immediate setting and the community.
- Evaluation is responsible for capturing the journey of the program, which may be more meandering than we initially intended.
- Evaluation creates knowledge through careful observation and constant reflection. It interprets what we are coming-to-know, the lessons learned and insights gained.

These lessons enlarge the program experience and provide a proper moral and ethical framing for the knowledge gained through experience. It aligns evaluation with Vine Deloria's explanation of the function of knowledge:

> The old Indians were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if it is to be useful, was directed toward that goal.

"The old Indians were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if it is to be useful, was directed toward that goal."

Vine Deloria, 1999

Reference

See Readings, "Indigenizing Evaluation Research."

Characteristics of Indigenous Evaluation

- *Has use and moral purpose*
- *Come to know within a context*
- *Subjective reflection*
- *Observation and relationship*
- *Focus on interpretation*
- *Drawing lessons, not judging*
- *Is not time-bound*
- *Everything learned has value*

The following describes characteristics of Indigenous knowledge that influence our approach to evaluation.

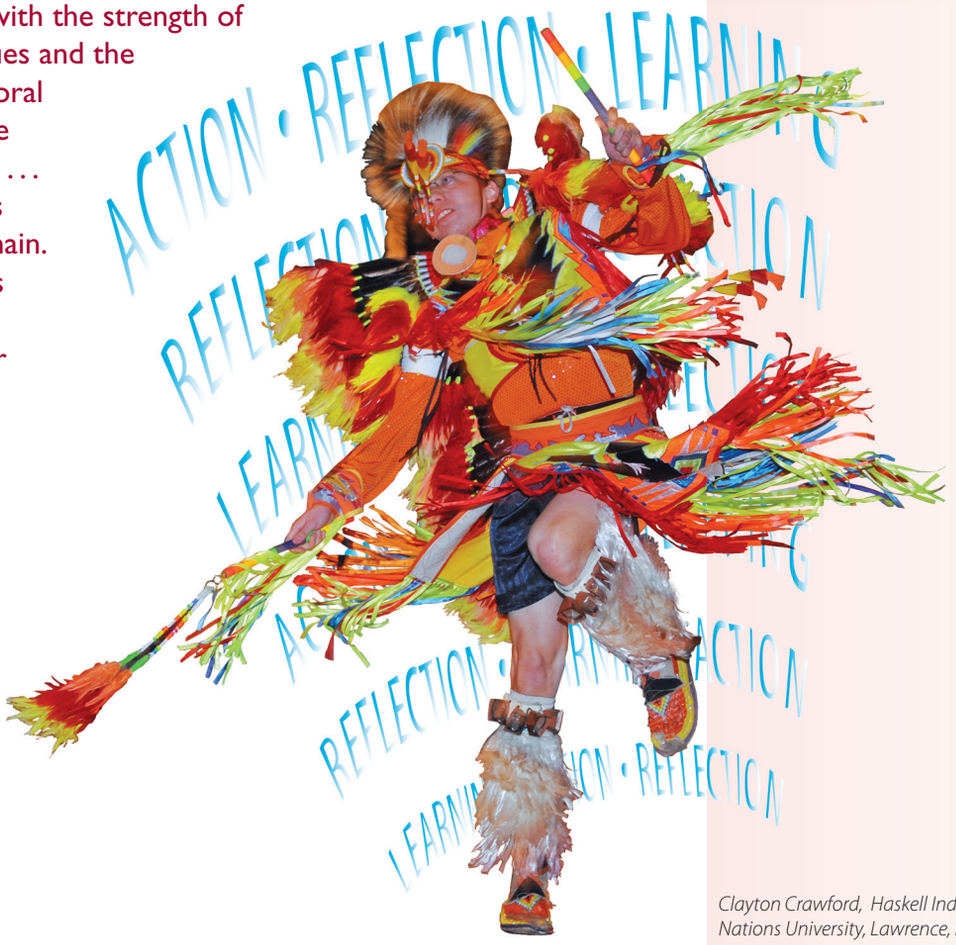
- As a tool for guidance, knowledge has function, usefulness, and a moral purpose.
- The truth of what we come-to-know is found in understanding the program within its context, which is multi-dimensional and complex.
- Knowledge is created through keen observation of program implementation and the relationships that result from putting a program into action.
- We come-to-know through subjective reflection on what we observe and experience and through reflection, creating the story we have to tell as a result of the program. And, as in most Indian stories, lessons are learned through the telling.
- We accept that things unfold in the ways that they happen. We do not attempt to manipulate as much as we attempt to interpret.
- Evaluation as knowledge creation in an Indigenous framing is about interpreting and learning and less about judging or assessing, although Indigenous evaluation would lead us to draw lessons from what we have learned.
- We understand that not all can be known or understood fully within the confined time frame of a program's implementation. As an elder explained, "You will know tomorrow what you learned today."
- We believe that knowledge gained through observation and reflection is of value beyond the program itself. As co-creators of knowledge through understanding the natural progression of the program, everything we do has importance.

Indigenous evaluation is integral to the action of the program. Through evaluation, reflection is constantly occurring, and it is the relationship between action and reflection that leads to learning and moving forward. The interaction is woven together in a spiraling motion of action, reflection, and learning.

Indigenous Evaluation Spiral—The interaction of action, reflection and learning.

Reclaiming our Indigenous epistemologies is essential to Indian people, according to Albert White Hat, Sr. On the importance of teaching the Lakota language, he said:

> Our language was invaded just as our lands were, and so also our ways of knowing. We need to bring back our ways of knowing and our languages with the strength of its spiritual values and the power of its moral force, just as we fight to reclaim … the sacred sites within our domain. Our Indigenous knowledge is *wakan*. It is our bloodline.[11]



Clayton Crawford, Haskell Indian Nations University, Lawrence, KS

[11] White Hat, Sr., A., *Reading and Writing the Lakota Language*, The University of Utah Press, Salt Lake City, UT, 1999, p.11, (paraphrased).

FRAMEWORK

Creating Knowledge

Core Cultural Values

Is there a set of core beliefs or common values that can serve as a foundation for framing a tribal approach to evaluation?

This question was the center of focus group discussions, meetings, and literature research, all of which contributed to the development of this Framework.

This section describes the common cultural values that emerged from the effort to define an Indigenous framing for evaluation. Although we have identified common values, which influence the ways evaluation should be undertaken in tribal communities, each community should consider this question and determine which values should inform its evaluation practice. To do so, communities could engage in a discussion prompted by these or similar questions:

We often refer to cultural values when designing programs for our communities:

1. What does this mean in our community?
2. What values do we promote when designing our programs?
3. How could or should these values influence our approach to evaluating our programs?

In the Indigenous Evaluation Framework focus groups, these values were identified as central to most tribal cultures:

- *Being People of a Place*
- *Recognizing our Gifts*
- *Centrality of Community and Family*
- *Tribal Sovereignty*

People of a Place

Dibé Nitsaa (Mount Hesperus)

Tsoodził (Mount Taylor)

Among Indigenous cultures, place is a living presence. Tribal creation stories explain how a people came to be in a place that is central to their sense of a homeland. Despite wrenching histories detailing the loss of much of our homelands and displacement from them, we still have strong connections to the natural world within and around these places—the lands, mountains, oceans, rivers, lakes and other features that make up our homeland. Our sense of place provides roots to our communities and defines our nationhood.

In *God is Red*, Vine Deloria writes about these sacred places:

> The vast majority of Indian tribal religions . . . have a sacred center at a particular place, be it a river, a mountain, a plateau, valley, or other natural feature. This center enables the people to look out along the four dimensions and locate their lands, to relate all historical events within the confines of this particular land, and to accept responsibility for it. Regardless of what subsequently happens to the people, the sacred lands remain as permanent fixtures in their cultural and religious understanding.[12]

In addition to a tribal people's responsibility to their sacred places, there is a reciprocal relationship in this profound connection to land. This is expressed by an Apache woman who explains, "The land is always stalking people. The land makes people live right. The land looks after us."[13]

In describing Native Science, Gregory Cajete explains that the peoples' places are sacred and bounded, and their science is used to understand, explain and honor the life they are tied to in the greater circle of physical life. Sacred sites are mapped in the space of tribal memory to acknowledge forces that keep things in order and moving.

[12] Deloria, Jr., V., *God Is Red*, Fulcrum Publishing, Golden, CO, 1994, p. 67.
[13] Basso, K. H., *Wisdom Sits in Places: Landscape and Language Among the Western Apache*, University of New Mexico Press, Albuquerque, NM, 1996, p. 38.

Everything has a time and an evolutionary path. This is the understanding of evolution through natural cycles. The universe has a direction to it, and people have a special vocation in that they initiated, at the proper time, new relationships and events.

A tribe's Indigenous knowledge is intimately connected to the natural world and is centered on learning about the place of the people within it—nature's balances and relationships. This sense of place is the opposite of the Western perspective, which seeks to manipulate the world and create what they believe is a better man-made environment. As Aua, an Iglulik, explained to an anthropologist:

> One of the differences between the white man's ways and [our] way is that most of the dominant society's world is . . . a highly technological world, invented in the form of machines, labor-saving devices, and urban systems of living. In this kind of world you learn to ask why because those inventions do have an origin that can be explained. But the traditional mysteries which include hunger, pain, sickness, and death, cannot be explained. They can only be witnessed and then dealt with through a system of knowledge and practices that let the natural world teach human society its complex, and often mysterious ways. The natural way . . . determines how people live, how people will act. In turn, education or learning determines how we will use the natural world to our benefit and how we can live harmoniously or in balance with it.[14]

Our Indigenous knowledge and culture, including our ceremonies, songs, and rituals, help connect our communities to the natural world around us. In the basket making story, when the Cherokee people were removed from the Southeast to a new and different land, Oklahoma, they had to learn new songs to help them deal with their new environment. As Eric Jolly states, "The old songs no longer worked," so new songs had to be brought forth.

White Mountain Apache Reservation Painting

"The land is always stalking people. The land makes people live right. The land looks after us."

Apache woman's quote

[14] Beck, P. V., Walters, A. L., Francisco, N., *The Sacred: Ways of Knowledge, Sources of Life*, Dine College, Tsaile, AZ, 2001, p. 51.

Centrality of Community and Family

Cankdeska Cikana Community College

"The community is the place where the forming of the heart and face of the individual as one of the people is most fully expressed. It is the context in which the person comes to know relationship, responsibility, and participation in the life of one's people."

Among Indigenous people, family and community are the core manifestations of how each tribal person sees his or her inter-relatedness to others within the tribe. The sense of family and community is expressed in different ways by different tribes. Most, if not all, tribal cultures recognize or are organized around various tribal kinship groups. Some have clans as a form of kinship group; others, such as the Lakota, recognize extended family groups—the *tiospaye*—as their form of kinship groups.

Gregory Cajete writes that it is within community that one comes to know what it is to be related:

> The community is the place where the forming of the heart and face of the individual as one of the people is most fully expressed. It is the context in which the person comes to know relationship, responsibility, and participation in the life of one's people.[15]

When we introduce ourselves, some of us acknowledge our ancestors and lineage, connecting the present with those who have lived before. Community is expressed in ceremony, in clan relationships, in family structures. As we proceed in life, we acknowledge that we have many grandmothers, grandfathers, aunts, uncles, and cousins. All of these are a part of who we are as a person and as a family. In most, if not all, tribal communities, the distinction that non-Indians make between nuclear and extended family does not apply because to many of us, our cousins are our brothers and sisters and our aunts and uncles carry the same authority as our parents.

Vine Deloria relates the value for family and community to the larger life cycle of the world, the seasons, and other growth processes:

[15] Cajete, G., *Native Science*, Clear Light Publishers, Santa Fe, NM, 2000, p. 96.

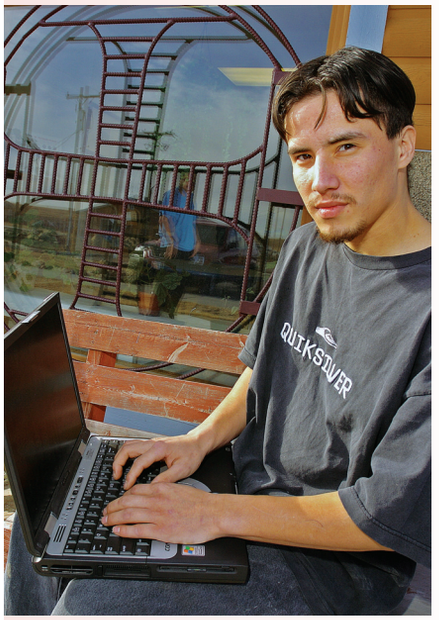
Thus all entities are regulated by the seasons, and their interaction has a superior season of its own that encompasses their relationship and has a moral purpose. Tribes broke human patterns down into several steps: prebirth, babies, children, youths, adults, mature adults, and elders. The idea of the "seven generations" was commonly used by the Plains tribes to describe the relationships existing within a genetic family. If a family was respectable and responsible, its members would be granted old age and a person could live long enough to see and know his great-grandparents and his great-grandchildren. Thus, generations, not decades, were the measures of human life.[16]

Recognizing our Gifts

Within the traditional concepts of the living universe and relationship, respect is a moral imperative. Respect for the sanctity of all things requires a willingness to allow "others to fulfill themselves, and the refusal to intrude thoughtlessly on another."[17] Every entity within this natural world has its purpose and should exercise free will and choice within its own realm. The core value of respect requires that we honor the uniqueness of every person and value his or her gifts. In education, each student's skills and talents, as well as learning style, should be taken into consideration.

From an Indigenous perspective, because each of us comes into the world with special gifts, each person also must show respect for his or her own gifts. Thus, life becomes a journey of self-discovery. This journey requires self-discipline and the courage to follow one's unique pathway in life.

Respecting and encouraging the full development of our gifts is one of our common cultural values. Some define this value as



Blackfeet Community College Student
Photo by Tony Bynum

Respecting and encouraging the full development of our gifts is one of our common cultural values.

[16] Deloria, Jr., V., *Spirit and Reason: The Vine Deloria, Jr., Reader*, Fulcrum Publishing, Golden, CO, 1999, p. 57.
[17] Ibid, p. 51.

Members of 2005 Student Government, Cankdeska Cikana Community College

"The duty of all people . . . is to assist others on their paths. . . ."

personal sovereignty, which allows us to fulfill our destiny. However, with the freedom for self expression there is a responsibility to respect the relationships we have within a living universe. Responsibility for maintaining harmony of life falls equally on all of us as does a responsibility to use our gifts to contribute to the community.

Rupert Ross, a legal scholar who has observed and written about First Nations in Canada, expressed the sense of personal sovereignty as:

> . . . the conviction that life is a process of slow and careful self-fulfillment and self realization. That process of maturation continues until death, and so no one ever becomes all that they can become. The duty of all people, therefore, is to assist others on their paths, and to be patient when their acts or words demonstrate that there are things still to be learned. The corollary duty is to avoid discouraging people by belittling them in any fashion and so reducing their respect for and faith in themselves.[18]

A focus group participant framed the nature of this life-long learning process:

> The Navajo way . . . we learn from knowledge that is out there, knowledge that we say has been given to the people, knowledge that has been specifically given to the Navajo. . . . It's not something that you learn in a short period of time or a defined period of time. Today, our children go through 12 years of school, and they are supposed to know quite a bit. But for Navajo People, learning about the knowledge given to the people is a lifetime thing. People from six to old age are still learning these things.
>
> Focus Group Participant, Phoenix

[18] Ross, R., *Dancing with a Ghost: Explaining Indian Reality*, Octopus, Markham, Ontario,1992, p. 27. (Ross cites two Aboriginal Canadians who guided his understanding: Dr. Clare Brant, a Mohawk psychiatrist and Charlie Fisher, an Elder from Islington Reserve.)

Sovereignty

Tribal sovereignty is our expression of nationhood. For each of our tribes, our sovereignty derives from our sense of place, our languages, history, and culture. It is deeper than a legal or political relationship.

> Good . . . projects in Indian Country are explicitly part of a nation-building agenda—that is, local people have themselves planned the project and placed it within a larger vision of what they hope their nation will be. Project evaluation can contribute to these nation-building efforts by providing needed feedback to local implementers and activists about what the problems that plague their nations are, how the problems might be solved, and how well the solutions are working.[19]

Reclaiming our Indigenous ways of knowing is an assertion of tribal sovereignty. We tribal people assert our right to design our own institutions, such as our schools and educational programs, or to redesign other institutions, such as our tribal governments and court systems, we bring into place values that are fundamental to our ways of knowing. Reclaiming our ways of determining merit and worth is also part of this process.

From an Indian perspective, tribal sovereignty has implications beyond the political because sovereignty resides within the community or the whole of the tribe, not solely with the tribal council or tribal leadership. In the future, the reclaiming of Indigenous knowledge, for some tribes, may involve moving away from governance based on the Indian Reorganization Act and toward restoring traditional forms of government.

National Museum of the American Indian Opening Ceremonies

Tribal Sovereignty

- *Nationhood*
  - *Ownership*
- *Political Status*
  - *Tribal process*
- *Reclaiming our Indigenous Ways of Knowing*
  - *Inherent right to think, feel, act*
  - *Capacity*
  - *Permission*
  - *Meaningfulness*

[19] Robertson, P., Jorgenson, M. & Garrow, C. "Indigenizing Evaluation Research: How Lakota Methodologies Are Helping 'Raise the Tipi' in the Oglala Sioux Nation," in *The American Indian Quarterly,* vol. 28, no. 3 & 4 (Summer/Fall 2004). University of Nebraska Press, Lincoln, NE, 2004, p. 519.

Glacier Waterfall, Glacier National Park, MT

Framing evaluation practice to be responsive to strongly held values is a continuously evolving process.

Indigenous evaluation practices that honor sovereignty try to engage the broader community of elders, traditionalists, and other community members while ensuring that tribal councils and tribal leaders are consulted. Indigenous evaluation engages any informal or formal tribal review processes that may be in place—such as review by tribal councils, program advisory committees, or tribal institutional review boards.

Cultural Values and Evaluation Practice

Exploring and naming our values is a first step in developing an Indigenous approach to evaluation. To establish a Framework for evaluation, we explored ways of knowing and central values that resonated throughout our research. We believe that these influence an approach to evaluation in a number of ways. Our epistemologies tell us that context is critical, and we can only come-to-know within a program's setting and situation. Our programs are place-based and must be designed and evaluated in ways that understand our connections to place. We recognize the unique gifts of everyone and cannot be limited to using only narrow measures of merit or achievement to assess learning. Community is central to our sense of ourselves as a people and should be considered in our evaluation practice. Finally, sovereignty dictates that evaluation belongs to the tribe and community and should be practiced in ways that help us learn and move forward. The table on the next page provides an overview of how the beliefs regarding knowledge and cultural values could influence evaluation practice in our communities.

Beliefs-Values	Indigenous Evaluation Practice
Indigenous Knowledge Creation	**Context is Critical** • Evaluation itself becomes part of the program and it's implementation, it is not an "external" function. • Evaluation needs to be holistic and attend to relationships between the program and community. • Evaluators must ensure that variables are to be analyzed without ignoring the entire program context. • Evaluation knowledge honors multiple ways of knowing. • Evaluation recognizes our moral responsibility to reflect on what we are learning and use knowledge to improve our programs and community.
People of a Place	**Respect Place-based Programs** • Honor the place-based nature of many of our programs by acknowledging its relationship to the community, including its history, current situation, and the individuals affected. • Respect that what occurs in one place may not be easily transferred to other situations or places.
Centrality of Community and Family	**Connect Evaluation to Community** • Engage community when planning and implementing an evaluation. • Use participatory practices that engage stakeholders. • Make evaluation processes transparent. • Understand that programs may not focus only on individual achievement, but also on restoring community health and well being.
Recognizing our Gifts–Personal Sovereignty	**Consider the Whole Person when Assessing Merit** • Allow for creativity and self-expression. • Use multiple ways to measure accomplishment. • Recognize that people enter programs at different places and with different skills and experience. • Make connections to accomplishment and responsibility.
Tribal Sovereignty	**Create Ownership and Build Capacity** • Ensure tribal ownership and control of data. • Follow tribal Institutional Review Board processes. • Build capacity in the community. • Secure proper permission if future publishing is done. • Report in ways meaningful to tribal audiences as well as to funders.

Traditional knowledge creation and cultural values provide the context for assessing Western evaluation practices.

Framing evaluation practice responsive to strongly held values is a continuously evolving process. There is not one set of steps or practices that define Indigenous evaluation. What it is, or becomes, will emerge from our collective attempts to ensure that traditional values are at the core of any approach to evaluating programs in our communities. As part of our discussion, we can explore ways in which evaluation can be responsive to the values we have defined as common. However, how Indigenous evaluation is realized in practice will depend on each program's situation and context within its own setting, community, and tribe.

Reframing Evaluation

Traditional knowledge creation and cultural values form the Framework for Indigenous evaluation. They provide the grounding for assessing Western evaluation practices for their relevance and applicability in our communities. It is from this Framework that Western evaluation practices such as logic modeling, design, or data collection should be considered and reframed. We are not suggesting that Western evaluation methods should no longer be used when working within an Indigenous framing. However, we believe that some methods can be questioned, adapted, and possibly even rejected when necessary. **The AIHEC Indigenous Evaluation Framework is not a new paradigm; rather it is a shifting of emphasis towards centering evaluation practice so as to respond to tribal values and community needs. The Framework guides our choices of methods and informs the processes we use to respect our cultures and engage our communities.**

In the past, the requirements or needs of funders have been the primary drivers for evaluation in Indian Country. Their expectations

of evaluation have usually been based on Western practice. However, if Native people are to take ownership of evaluation and fully benefit from it, we need to examine what evaluation really means in our contexts. We need to look at traditional beliefs and values and let these influence our way of practicing evaluation.

The goal is to make our values the central drivers for evaluation practice, rather than assuming we have to accept only Western values. This does not mean that Western evaluation should be abandoned. Many aspects of evaluation practice within the Western tradition are highly compatible with Indigenous values and ways of knowing.[20]

To our funders, we need to articulate the reasons behind our evaluation choices, with the goal of eventually influencing their expectations. We may never fully change their expectations, and we will need to accommodate their mandates in our evaluations. However, as our understanding, practice, and articulation of Indigenous evaluation grows, external influence from funders should also become more responsive to our sense of the correct way to evaluate our programs. We want to draw them into the circle.

The following sections outline the basic steps involved in conducting evaluation within the Framework of Western practice. However, in presenting the steps involved in doing evaluation, the Indigenous ways of knowing and values discussed thus far are used to guide a reframing process. The reframing is an attempt to look at Western practices through an Indigenous Evaluation Framework and consider how these practices could or should be adapted to be responsive to the tenets of Indigenous knowledge creation and the common values of place, personal gifts, family and community, and sovereignty.

[20] AIHEC recommends that all evaluators working in Indian Country also consult the American Evaluation Association's Guiding Principles for Evaluation. (See Resources.)

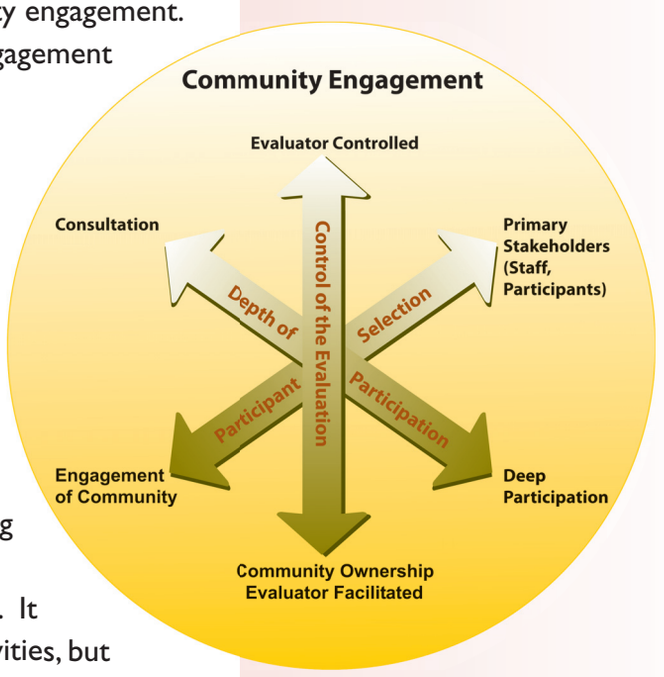

CORE CULTURAL VALUES
INDIGENOUS KNOWLEDGE
KEEN OBSERVATION
MULTIPLE PERSPECTIVES
SOVEREIGNTY
COMMUNITY
GIFTS
PLACE
INDIVIDUAL & COMMUNAL EXPERIENCE
ENGAGING COMMUNITY AND BUILDING CAPACITY
CREATING THE STORY
PLANNING, IMPLEMENTING AND CELEBRATING
BUILDING THE SCAFFOLDING

Engaging Community in Evaluation

Central to our core values is respect for our community and tribal sovereignty. To honor these values, Indigenous evaluators should find ways to engage community and create a sense of ownership of the evaluation process. Throughout our discussion of this Framework, we will describe different ways to engage elements of the community in evaluation. However, before describing the steps involved in doing an evaluation, it is useful to consider the various roles for community participation.

The figure illustrates three dimensions of community engagement. Each line on the diagram represents a continuum of engagement and participation. These are:[21]

1. Control of the evaluation.
2. Selection of participants for engagement.
3. Depth of participation.



Control of the Evaluation

One element of participation is control of the evaluation. The evaluator can maintain total control over the evaluation, which is at the top end of the continuum. In this case, the evaluator decides the timing and direction of the evaluation and has control over all aspects of data collection, analysis and reporting results. It does not mean that the evaluator does all of these activities, but has control over who does them and the processes used. At the lower end of the continuum, the community has total control over the evaluation. Through community processes, which are facilitated by the evaluator, decisions are made regarding the timing and direction of the evaluation and means for collecting data, doing analysis and reporting results.

[21] Figure and discussion adapted from Cousins, B. & Whitmore, E.,"Framing Participatory Evaluation," in *New Directions for Evaluation*, no. 80, American Evaluation Association, Fairhaven, MA; Wiley Periodicals, Inc., Wilmington, DE, co-pubs., 1998, p. 5–23.

Lac Courte Oreilles Ojibwa Community College

In framing Indigenous evaluation practice, the evaluator is encouraged to move toward greater community control, involvement, and participation.

Selection of Participants for Engagement

Those who have a stake in the evaluation can be a wide ranging group. The director and staff in a program are primary stakeholders. Those who are served by the program are another group of stakeholders. The community in which the program is situated is a stakeholder. For example, the tribal college is a stakeholder for programs that operate within the college and serve its students. However, the tribe itself is another level of stakeholder. As shown in the figure on page 43, participation can be limited to staff and immediate beneficiaries of the program (upper right), or it can include a very broad segment of the community, such as elder associations, community, tribal council members, or those invited to special events related to the evaluation and program planning (lower left) Again, the degree of participation can vary along this dimension, from only a few people engaged in conducting the evaluation, to broad community participation.

Depth of Participation

The third dimension is the depth of participation. This can range from fairly limited, such as offering advice or reviewing instruments to be used in the evaluation (upper left), to a deeper level (lower right) that involves engaging participation in many aspects of the evaluation, such as collecting the information, analyzing data and writing reports.

Examples of Engagement

Community engagement can take many forms. An evaluator who was engaged in a large evaluation of Aboriginal Head Start in Canada began the evaluation planning with a community feast to announce the purpose of the evaluation. The meeting was open, food was served, and advice of those attending was sought.

Another evaluator, working within his own tribal community, makes it a point to ask that work groups of community members, including elders,

be part of program implementation. These work groups have become important sounding boards for problem solving and formative evaluation feedback on program implementation. Some of these work groups have been formally recognized by tribal council resolution.

In Indigenous communities, community engagement and public participation may be quite different from non-Indian communities, where a willingness to offer public comment might be common. We know of a situation where the Indian evaluator was mandated by federal program officers to get public input, but the only form of public input deemed acceptable was a public meeting. However, in this community, conducting a typical public meeting was not an appropriate cultural route for hearing from the community. The evaluator had gathered considerable input from community members, many of whom were on the program's advisory committee, as well as from staff and participants in the program. As one program stakeholder noted, "We are the community. We represent our constituencies, our clients, and our families." However, the federal program officer did not consider the input from these individuals to be valid input from the members of the community's public, even though the people lived in and were a part of the community. At the federal funder's request, public meetings were scheduled and held throughout the reservation. However, they were poorly attended and generated very little information.

Every program will have different constraints and opportunities for engaging the community. However, in framing Indigenous evaluation practice, the evaluator is encouraged to move toward the lower segment of the circle, toward greater community control, involvement, and participation. Throughout this workbook, we consider ways in which various levels of stakeholders and community can become engaged in evaluation activities.

Leech Lake Tribal College

Reference

See Readings, "Indigenizing Evaluation Research." The authors, Paul Robertson, Miriam Jorgensen and Carrie Carrow, describe an evaluation at Pine Ridge which changed direction as a result of community engagement.


INDIGENOUS KNOWLEDGE
KEEN OBSERVATION
MULTIPLE PERSPECTIVES
SOVEREIGNTY
COMMUNITY
GIFTS
PLACE
INDIVIDUAL & COMMUNAL EXPERIENCE
CORE CULTURAL VALUES
ENGAGING COMMUNITY AND BUILDING CAPACITY
CREATING THE STORY
PLANNING, IMPLEMENTING AND CELEBRATING
BUILDING THE SCAFFOLDING

Creating Our Story

One of the most repeated phrases throughout all of the focus groups was, "Our evaluations need to tell our story." Story telling is an excellent way to describe Indigenous evaluation. Traditionally, lessons are imparted through stories. Telling the program's story is the primary function of Indigenous evaluation.

"Through the oral tradition, story becomes both a source of content as well as a methodology."

Gregory Cajete

The first step in the evaluation process is to reflect on what the program plans to do. In our Framework, we call this **creating the story the program wants to tell.** Then, through the process of story telling, we can examine the story we planned and compare what we thought would happen with what actually happened. Thus, by reflecting on the story (our program) as it unfolds, we fully realize the lessons learned from our experience. Evaluation, as story telling, becomes both a way of understanding the content of our program as well as a methodology to learn from our story. By constantly reviewing our story, we enter into the spiral of reflection, learning from what we are doing, and moving forward.[22]

Native American Week, Chief Dull Knife College

In the basket metaphor, the weaving of an inner and outer wall together gives the basket strength. To fully realize the power of Indigenous evaluation, we weave program implementation together with program evaluation. We start the weaving by describing the story of the program—the story we plan to tell as a result of doing activities that lead to outcomes. As the program is implemented (creating the inner wall), evaluation (as the outer wall), captures the story that emerges allowing for reflecting, learning, and improving the program.

Reference

See Indigenous Evaluation Spiral, page 29 in the workbook.

[22] The reference to story as methodology is from Cajete, G., *Native Science: Laws of Interdependence*, Clear Light Publishers, Santa Fe, NM, 1999, p. 94.

Create the story the program hopes to tell.

Blackfeet-Browning High School Student Project

How to Create the Story

Stories have a plot, activities, characters, beginnings and endings. A program's evaluation story includes these elements. It explains the plot line, the relationship of activities to proposed endings or goals. It identifies the key players, those involved in implementation and those served or influenced by the program. It has a setting—the context in which our program operates. Often, when creating the story, these elements and their relationship are illustrated in a graphic form like a diagram or a drawing.

Illustrating the story should capture the relationships between activities and outcomes. It should also aid in building a shared understanding of how the roles of various actors relate to each other and to the desired outcomes. Diagramming or drawing the activities and outcomes forms a type of storyboard that visually illustrates the program.

By creating the story as an initial step, Indigenous evaluation is similar to the modeling practices promoted by Western evaluators. In Western practice, methods used to illustrate a program's intended story use terms such as: logic model, program theory, or theory of change. In reframing this practice for Indigenous evaluation, we do not recommend any one method or format for describing a story. The sequential ordering of logic modeling or other structured formats may not fit our communities. The model, graphic or drawing used to describe the story are best determined by the program within its own context.

There is no one specific way to approach story creation. The key in story creation is to take time to list or illustrate all the elements and their relationships. This process differs from simply listing goals, objectives and activities, which is the language of proposal writing. In

creating the story, the goal is to describe how the major elements of the program relate to each other to reach the outcomes of the program, or final destination. It is important to consider all the elements that are engaged in conducting the program, and then to connect these to desired outcomes or results.

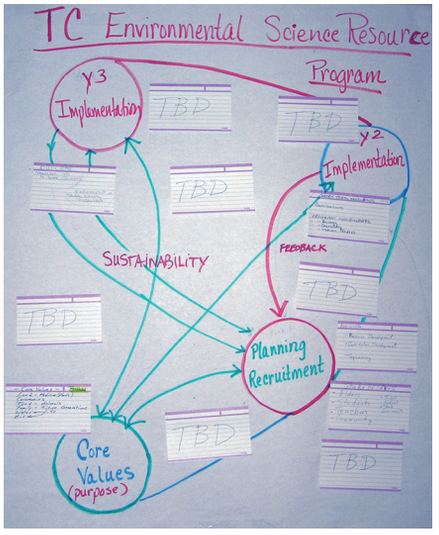
In working on a program's story, it is useful to list or describe:

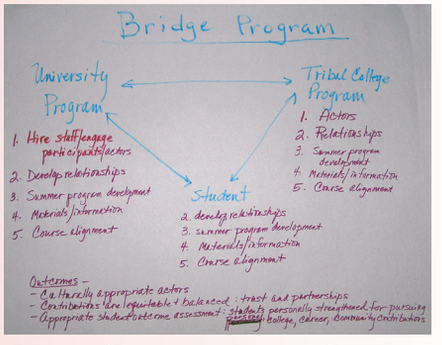
- Overall mission or anticipated outcomes.
- Context or setting.
- Activities that must be completed to achieve the anticipated outcomes.
- Relationship of activities to each other and to outcomes.
- Resources needed for the activities: (a) human—including those who make the activities happen (staff, volunteers) and those who take part (participants, clients); and (b) other resources needed.

Creating the story involves seeing how the program represents a set of connections that build toward the desired outcomes. It is helpful to draw a diagram that captures these relationships between

Goal of Story Creation:

Describe how program elements relate to one another to reach the destination.





Examples of Diagrams and Drawings of Program Models Developed in Workshops

Paddle to Lummi, Northwest Indian College

Tribal Journeys, Northwest Indian College

the activities and outcomes. Initially, the picture may be incomplete, but it will represent the beginning of a process that allows the program staff, stakeholders, constituents, and the evaluator to understand the purpose and intentions of the work being accomplished.

There are many ways to capture the relationship between activities and outcomes. Whatever form the diagram or drawing takes, it should tell the story of how the activities relate to each other and to the outcomes or goals of the program. Arrows are usually used to show the relationships among the elements of the program.

A program of economic development in the Pacific Northwest where canoe journeying is part of the culture is considering a model based on drawings of canoes with the paddles illustrating activities, the paddlers representing staff and stakeholders, the stopping points along the journey are the short term outcomes, and the final outcomes are shown at the final destination for the journey. The format for telling the story can evolve over time. For example, in the canoe journey program metaphor described above, the program model began with a more traditional logic model design recommended by the program funders. However, using a metaphor relevant to the culture will communicate the story more effectively in the community.

Example of Story Creation

To illustrate a story, let's look at a summer employment program for youth. In this community, concern over students dropping out of high school and having few opportunities to see the value of education inspired the tribe to develop the summer work program. The program has a number of activities, including: recruiting youth, providing training for good work habits, recruiting employers, matching youth to jobs, monitoring their employment, and celebrating

their accomplishments at the end of the summer. The major outcomes anticipated could be: creating good work habits among youth, creating interest among youth in school (as a result of experiencing the relationship between school and employment), and improving subsequent school performance.

This project is modeled into the story we hope to tell on page 52. This model links activities with immediate or short term outcomes and long term outcomes. In this example, the staffing for the program may be two or more people. In developing the story, it is useful to note who does what and how the activities relate to outcomes.

The Logic Model

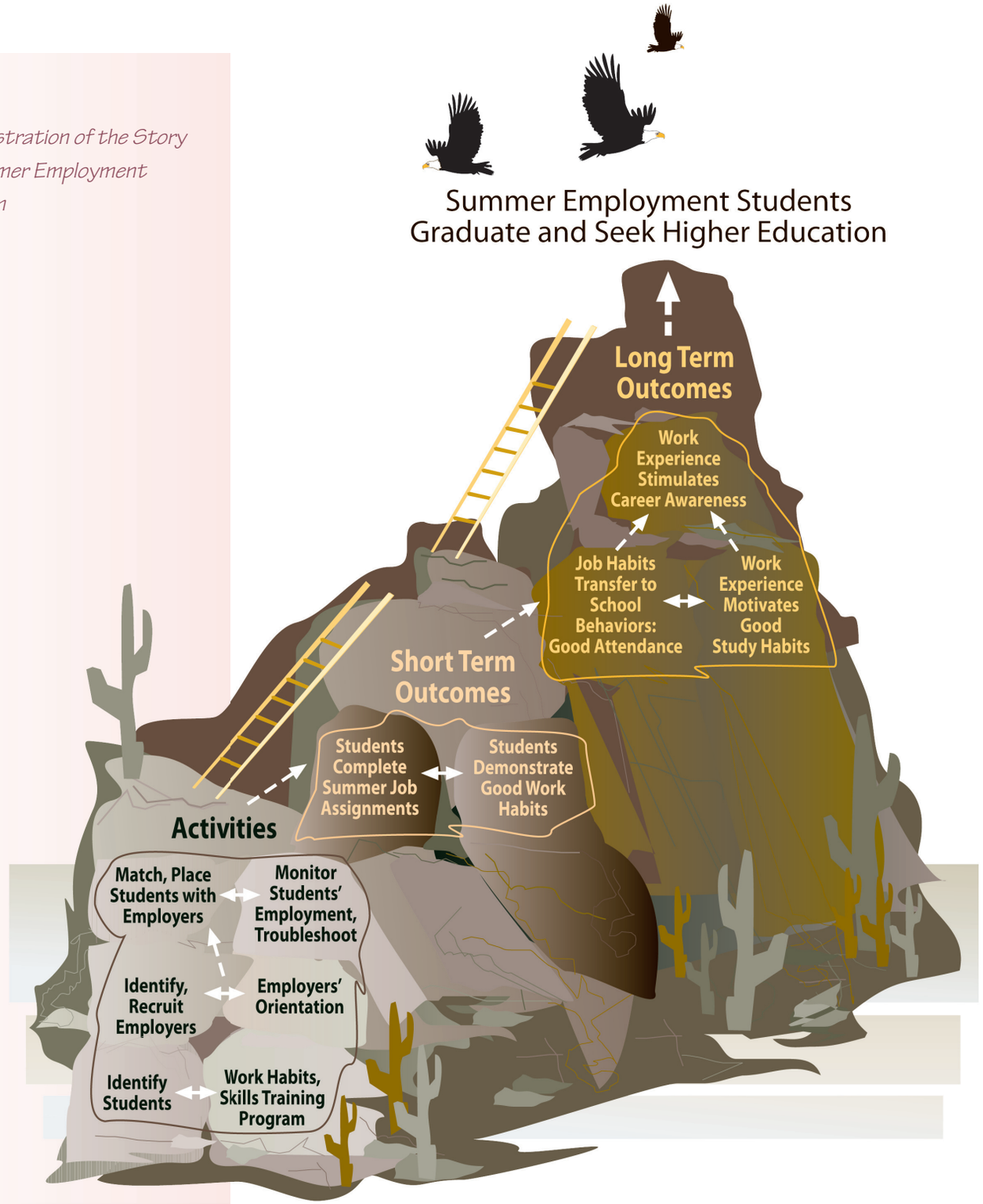
Many funders are asking that the diagram of a program follow a specific model. The most common model, logic model, is a sequential diagram that shows the linkages between resources, activities, outputs or short term outcomes, and long term outcomes. There are variations of the model, for example, outputs might follow activities and then link to outcomes. Outcomes can be divided into short, intermediate and long term. The basic logic model is illustrated below.

We encourage an approach to story modeling that is more creative than the basic logic model. As we have stated, we encourage the drawing of a model that communicates the story in a way understandable in the community. However, if funders require a specific template, we recommend that you consider developing a program model that fits your community and, for your funders, adapt it to fit their template.

Reference

Examples of different approaches to diagramming or drawing a program's story are found in the Resources section.

One Illustration of the Story of Summer Employment Program



In reframing evaluation, the style of storyboarding should be determined by the situation and preferences of the program stakeholders. **Taking time at the beginning of the program to reflect on the program, to Create the Story is critical. This activity is the first step in linking evaluation to program implementation.**

Sitting Bull College Students with Elder

Indigenous evaluation is by its very nature a capacity building exercise.

Identifying Program Assumptions

Another useful activity is to identify how the activities relate to the program hunches or assumptions. Earlier, we described that when a program is designed, it can be thought of as a hypothesis, or a series of hunches about how and why the program activities will result in certain anticipated outcomes. These hunches are the assumptions that underlie the reasoning of the program (why the program should work). It is possible to implement a program exactly as planned, and yet, the anticipated outcomes are not realized. In such cases, the program may have been built on faulty assumptions. It did not fail in the implementation; rather, the theory (the set of hunches) was not on target. Evaluation becomes an even more powerful learning process when we track not only progress in implementing the program, but also examine the assumptions underlying the work. This is important in framing an Indigenous evaluation as, often, assumptions are culturally embedded.

In the job training example, one assumption is that there are jobs for youth that demonstrate the value of furthering their education. Also, we assume that the employers are willing to hire youth. Another assumption is a link between good work habits and school behaviors. Some assumptions are fundamental to program implementation (staff is available in the summer to run the program, or even more fundamentally, there are people with the appropriate skills to staff the program). When such basic assumptions do not prove true, they can handicap a program from the start.

Navajo Technical College Greenhouse Project

There is no formula for identifying the assumptions. Listing the assumptions made in designing a program creates a deeper understanding of the plot lines for the story you want to tell. The article, "Which Links in Which Theories Shall We Evaluate" describes the process of using the program's assumptions to guide an evaluation.

Creating the story and identifying assumptions are similar to the Western evaluation practice of developing program theory. We support using the basic idea of conceptually modeling the relationships in the program and developing its theory of change. Within the AIHEC Indigenous Evaluation Framework, this is simply the act of creating the story of the program and how its parts, such as staffing and other resources, activities, outcomes, fit together.

Grounding the Story in Core Cultural Values

As the process of creating the story begins, evaluator and program staff are provided with an excellent opportunity to consider core cultural values in the Indigenous Framework such as including community or considering multiple ways to describe accomplishment and outcomes. Some important elements of program stories are not necessarily included in Western practice, but are essential in making evaluation responsive in our communities. When working from the AIHEC Indigenous Evaluation Framework, the evaluator should take care to place the program's story into the setting and also to involve community as much as possible.

Often, when writing a proposal for a desired program, the goals and objectives usually reflect the priorities of the funding agency since the agency develops the criteria for how the proposal will be assessed. However, given the place-based situation and the focus on community inherent in our values, program staff may have goals for

programs beyond those expressed in a proposal. In telling the story, the evaluator and staff need to consider not only the plot line of the funded program, but also its relationship to other programs and events in the community. This is especially important for tribal institutions that are implementing multiple projects that are aimed at similar needs, concerns, and outcomes and funded under different grants.

At one focus group meeting, a participant expressed a common frustration faced by many tribal programs: the need to bend funding requirements to the situations of our communities. He described the disjunction between the requirements in many requests for proposals and the issues the community is really trying to address. In this case, it is useful to look carefully at all the things we are trying to accomplish and how we might take advantage of the program we have (although not perfectly aligned with our needs) and make whatever connections are possible to meet our priorities.

Making Connections and Expanding Horizons

An excellent example of making connections and expanding program horizons is found in the article, "Indigenizing Evaluation Research" about Project CIRCLE at Pine Ridge, SD.[23] Initially, this program to improve the criminal justice system on the reservation had as its goal a percentage reduction in the reservation crime rate. However, after the program staff took a broader look at the program's possibilities and considered its interface with the community, they changed the project's scope to rebuilding the criminal justice system from an Indigenous perspective. They revised their goals to look at root problems in the organization and orientation of the current system and recast the project as Nation Building.

Engage Community in Story Creation

- *Staff*
- *Stakeholders*

Be Inclusive

- *Situated in community*
- *Expand story to show relationship within community*

Reference

See Readings articles, "Which Links in Which Theories Shall We Evaluate," "Indigenizing Evaluation Research."

[23] Robertson, P., Jorgenson, M. & Garrow, C. "Indigenizing Evaluation Research" in *The American Indian Quarterly,* vol. 28, no. 3 & 4 (Summer/Fall 2004). University of Nebraska Press, Lincoln, NE. 2004, p. 499, 506-507, 519.

Salish Kootenai College

Much of Indian education, including operational funding for TCUs, depends on funding from different federal agencies and foundations. It is all too easy for staff and constituents working under one grant to become centered on their specific program, rather than considering how their project may fit into the larger picture of community programs and constituencies. When programs operate in isolation from each other, this is sometimes known as the silo effect.

The silo effect is often fueled by demands to attend to the needs and requirements of the granting agency, sometimes at the expense of opportunities to collaborate or coordinate with other programs within the community to achieve similar goals. Rather than viewing programs independently, it is useful to see them as interrelated, perhaps as trees in a grove. Using this metaphor, we can view each tree as a separately funded program; however, the root systems are intertwined, tapping into the soil nutrients and the same water sources which nurture the health of the entire grove. Thus, it is important to consider how each program we are evaluating links to all the other programs or institutions contributing to the health and welfare of the community.

An evaluation of a parent education program on a small reservation provided a lesson on the importance of casting a wide net to capture the potential impacts of a program. The funders expected a fairly straightforward story. The plot line was the funding of two staff members who would recruit at-risk families into structured parenting classes. However, when the evaluators worked with the staff and the community to outline the story, the plot line was significantly revised.

The staff assumed that the primary problem in delivering parent education services was the lack of collaboration across the number of family-related and health-related departments in the tribe. Acting on

their assumptions, they believed that many of the departmental programs presented natural opportunities to deliver parent education. Consequently, they developed staff retreats to bring tribal employees together to discuss ways in which to collaborate, organized tribal wide train-the-trainer parenting education classes so that each appropriate program could offer such classes, and encouraged the development of formal parent training in the Head Start program and in the women's substance and alcohol abuse program.

Evaluative statements can help guide the inquiry process.

Initially, the funders were concerned that the program staff was not following the program design to conduct parent education classes and not meeting their expectations. However, once they understood the way in which the program staff was casting the project more broadly to incorporate the tribal community programs, they welcomed the effort. Even though this project is no longer funded externally, its work is being continued through other tribal programs with sustained funding and parent education has been incorporated into tribal programs.

Kyi-Yo Powwow at University of Montana

Engaging Community

Engaging community is an important element of Indigenous framing. Knowing when and how to include community is an ongoing responsibility, and each program evaluation will need to sort out the engagement processes. If we value community, engagement should begin early, during the first step of story creation.

Approaches for engagement will vary depending on the different community constituencies. It is possible to engage the community in phases with the staff and evaluators working together to make the first attempt at describing the initial story. This story can form the basis for further discussions with other segments of the community: staff in other programs or departments, elders' councils, tribal leaders, students, or client groups. When asking various groups to review and contribute to the program's story, the evaluator should follow a respectful process that invites everyone to contribute his/her views, and to identify where there is consensus and where there are differences in perceptions. These consultations will help clarify and situate the program and establish its relationship to the setting and place.

Examining the Story

Once the program story has been created and assumptions are defined regarding what is needed to make the story work, the next stage in evaluation planning is to describe what is important to learn as the story unfolds. In the "Indigenizing Evaluation" article, the Lakota elders translated their ways of knowing into the English word, inquiry. An inquiry process is

Salish Kootenai College Forestry Student

fundamental to evaluation. In the reframing process, Indigenous evaluation can examine the story by posing evaluation questions in ways similar to Western practices. Posing questions sets the inquiry into the program's journey and serves as a guide for the information that must be collected to tell the story.

In the focus groups, it was noted that in some tribal communities, asking questions directly may be considered rude or intrusive. Reframing questions as evaluative statements can help guide the inquiry process. Using evaluative statements establishes situations we will explore through our process of inquiry. Formulating evaluative statements can be challenging, but it is a positive alternative to the use of direct questioning which may adversely affect the evaluation process.

Indigenous Evaluation Spiral—The interaction of action, reflection and learning.

Questions or statements should generate information to engage the spiral of action, reflection, learning, and moving forward.
Questions or statements can be developed at different levels and for different purposes. They can explore program assumptions or track implementation. They will guide the structure of the evaluation.

Overarching Key Questions or Statements

These are the main questions or statements that, when answered or explored, describe the entire program story. They are most often the level of questions that are included when writing the evaluation section of the proposal to a funder. Although major questions are

drawn from a specific program's content, some general examples of major questions (and their reworking as statements) include:

Key Question	Evaluative Statement
Was the program implemented in the ways anticipated? If changes were made, what reasons or situations influenced the changes?	We will track our implementation to learn how it unfolded, what changes occurred, and what influenced changes.
How well did the program serve the intended population?	It is important to know how people benefited from our program.
How well did the program's activities lead to the desired outcomes?	We want to understand how the program activities make a difference, especially in causing changes we hope to achieve.
What are the major lessons learned?	We need to learn from the work we do so we can continue to make improvements.

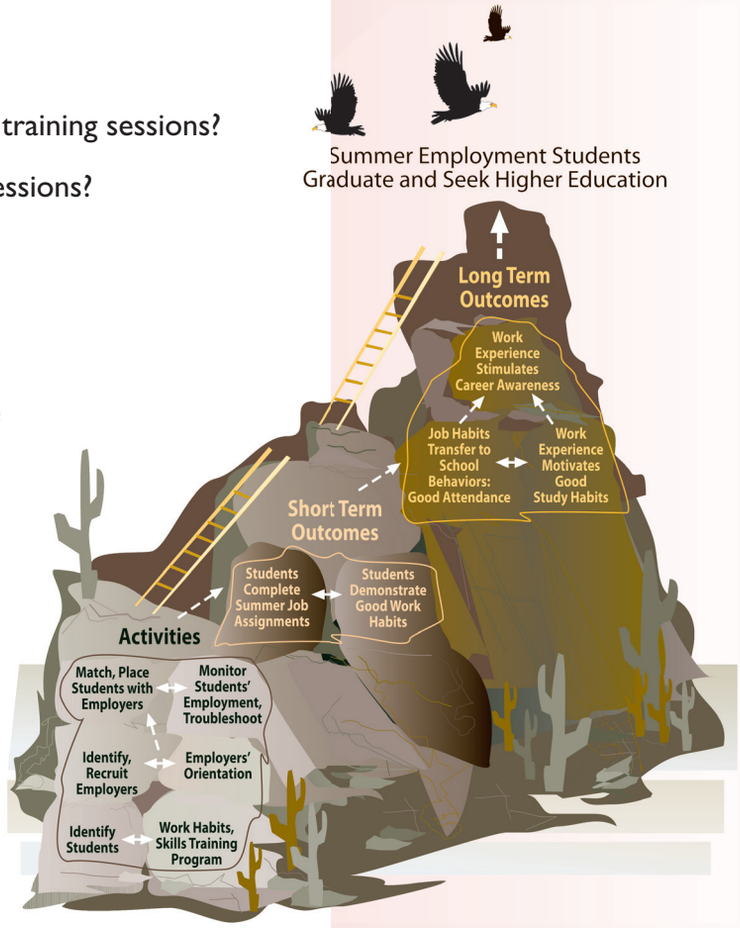
In our example of the summer employment program for youth, we might pose the following major questions or evaluative statements:

Key Question	Evaluative Statement
How many youth participated and did those participating meet the demographics of the program?	We want to know who participated and whether they were the youth for whom the program was designed.
How satisfied are the youth and the employers with the project?	We need to understand the experience of both the youth and employers and whether each was a good experience.
Were any of the youths' work habits carried over to their school behaviors?	We want to follow our youth after they return to school. We want to see if the program changed their attendance and academic performance.
What major lessons were learned from the summer experience?	We have lessons to learn so we can continue to improve this program when it is offered next summer.

Detailed Questions that Guide Design and Data Gathering

As an evaluation unfolds, a number of questions will guide the specific inquiry into the program These questions help in the development of tools—such as interview guides, focus group questions, surveys or review of documents and records for gathering the information. In the youth employment program example, some of these questions might be as follows. (As you look at the following questions, think about what your evaluative statements would be.)

- Is there any relationship between youth demographics (age, school attendance, performance, home address) and their successful participation in the program?
- How were youth recruited?
- What recruitment strategies worked best?
- What was the attendance for the job-skills training sessions?
- How satisfied were the youth with these sessions?
- How were employers recruited?
- What types of jobs were most effective in inspiring youth to do well in school?
- How satisfied were the employers with the program?
- Is there any relationship between job placement and youth participation in the program?



The list can go on and questions will emerge as the evaluation unfolds. Various types of questions can provide structure to guide an evaluation. Combining the type with the content of a program will yield a good set of questions to guide the information gathering process.

Types of Questions/ Statements[24]	Examples
Program Progress	Describes what is going on: who is participating and the amount of participation.
Program Outcomes	Describes the anticipated changes such as: better performance or more interest in science.
Relationship of Outcomes to Program	Connects outcomes to the program: comparison of performance of those in the program to a group not in the program or assessment of the results of the program.
Links between Process and Outcomes	Explores how process relates to outcomes: relationship of participants' characteristics to outcomes.
Explanations	Explores how or why: examination of program assumptions.

[24] Adapted from Weiss, C., *Evaluation*, Prentice Hall, Upper Saddles River, NJ, 1998, p. 75-76.

Process and Outcome Evaluation

The preceding table describes two major functions of an evaluation—the assessment of the program's process and its outcomes. Process evaluation looks at what is happening during the implementation of the program—who is being served, and what services are being offered. Understanding how the program is being implemented and for whom it is serving are important elements in our story. We can learn much from our reflections on how the program is unfolding.

Outcome evaluation describes what the program accomplished, the end results. Since the program's story predicts outcomes or results, evaluation needs to carefully consider what outcomes are important to consider. Often, outcomes that are not anticipated may occur. These also provide insights and learning. The important concern is to use evaluation to understand the range of outcomes that were achieved and, to the greatest degree possible, the relationship of the program's processes to the outcomes.

In our example of a summer youth employment program, we may find that we did not get the enrollment we anticipated from a certain school or geographic area (looking at the program's processes). This information is important in planning for marketing or transportation services. We may find that the program was especially successful in improving the school behavior of youth who worked in the tribal Natural Resources Department, compared to those who were at other work sites. This could be an important outcome finding. This information helps us look at the youth's employment experience in the department (an aspect of the program's process) to see if it can be used as a model for other employers. In this example, we see the value of looking at both process and outcomes to search for insights gained about their relationships.

Formative and Summative Purposes of Evaluation

The words formative and summative are familiar terms in Western evaluation. They are used to describe the functional uses of the evaluation findings. Formative evaluation uses information from the evaluation while the program is being implemented to make changes or improvements. Summative evaluation looks at the final results—it summarizes the final outcomes and learning. Process and outcome evaluation can be used for both formative and summative purposes.

Telling the Story

This section describes how evaluation works closely with stakeholders to create the story of the program. It explains ways to identify what is important to learn or examine from the story of the program as it is implemented; common activities in Western evaluation practice, but we have reframed these practices. We encourage careful use of language, avoiding terms such as logic modeling or developing a theory of change, by focusing on the more familiar and straightforward explanation, creating and telling a story.

Sitting Bull College Environmental Science Students Conduct Scientific Research in a Tropical Environment

Evaluation will help us reflect on and learn from the story we are telling by using inquiry to capture information. Developing evaluation questions guides this inquiry. In the reframing of Western practice, we suggest that developing

evaluation statements may be more appropriate in our communities and illustrate how questions can also be statements. However, we are not saying that questions are not useful or appropriate, only that alternatives to questions should be considered and used if this fits the culture of the community and situation of the program.

As the program is implemented, the story unfolds. By tracking this unfolding, we set up an inquiry into the relationships between our assumptions regarding the relationship of activities to outcomes. Story creation is the first stage of an evaluation. It is part of the foundation to the basket that joins evaluation with implementation. It establishes the parameters of the evaluation and direction of the inquiry, and sets the stage for creating knowledge—the knowledge that leads to learning. Respecting our traditional values, we have a responsibility to use this knowledge to move forward.

In the next sections, we describe evaluation design and the methods for collecting the data that inform the evaluation. These activities are woven throughout the implementation of the program. They define the outer wall of the basket as it is woven.

FRAMEWORK

Creating Our Story

Building the Scaffolding

This section describes the design or methods that will be used to address our evaluation questions. We refer to design as Building the Scaffolding, as it describes the shape and the building blocks that will be used to create the evaluation. The questions we want to answer to tell our story influence the designs to be used in the evaluation. For example, if we want to know what changes occurred in those who participated in the program, our evaluation design will include methods to assess change. If we want to understand how the program is being experienced and what people think about the services, we will need to include methods that yield this type of information.

Evaluation designs:

- *Quantitative*
- *Qualitative*

Major Approaches to Designing Evaluations

To build the scaffolding, we first need to revisit the traditional ways in which knowledge was gained. Two of the three elements to traditional knowledge described by Vine Deloria include learning from keen observation of the environment and individual and communal experiences. These traditional methods support multiple ways of knowing using what Western evaluation science describes as quantitative and qualitative methods.[25]

Observation of the Environment

To understand our program's story and collect information related to our evaluation questions, we need to observe and record data on many aspects of the program. Our evaluation scaffolding will include data that require counting, measuring, and computing percentages. Examples of this type of observation include:

- Attendance records
- Scores and ratings
- Tallies of survey responses

[25] Use of more than one primary method or approach is formally described as a mixed method evaluation design in Western evaluation literature.

- Rubric scores of demonstrations
- Retention rates
- Completion and graduation rates

They are collected through recording a number. Some would consider this objective data; however, in our representation of knowledge as described by Manulani Meyer, these data are considered facts. In Western evaluation, these data are called quantitative.

Observation of Individual and Communal Experience

Gregory Cajete cautioned us that knowledge is more than explaining an "objectified" world, and Manulani Meyer stressed the importance of the subjective, that is our relationship to facts and to experience. We cannot fully understand our program's story if we do not explore individual and communal experiences of those engaged with the project. We capture this information primarily by talking with people. However, images such as pictures or videos also record people's

Southwestern Indian Polytechnic Institute Nature Resources/Environmental Science Student

experiences. As Indigenous evaluators, we understand this type of data as:

- Stories captured in talking about the program:
  - With individuals being served, or other stakeholders;
  - With groups of people being served, or other stakeholder groups;
- Stories of relationships within and across programs;
- Images created through photographs or drawings;
- Images of relationship captured in video recordings.

Western evaluation defines this type of information as qualitative data. It describes experiences and relationships through narratives and images rather than numbers.

Knowledge Is Gained through Multiple Perspectives

The traditional principles of knowledge creation demand that we not limit our approaches when designing an evaluation. We need to include multiple vantage points. Marlene Brant-Castellano described traditional empirical knowledge as that which is gained through careful observation from multiple vantage points over an extended time. In Western evaluation practice, use of multiple vantages points that include collecting both quantitative and qualitative information is called using mixed methods. Our traditional approaches to knowledge creation always encouraged the use of mixed methods because we need to gather both quantitative and qualitative information to fully understand a program's story. All of our evaluations will use both quantitative and qualitative approaches within its design. Indigenous evaluation demands that evaluators be skilled in knowing how to carefully observe and measure as well as how to listen. These skills also depend on having the ability to build relationships and foster participation.

Nested Layers of Knowledge

Northwest Indian College

Gathering Information Over Time and Measuring Change

As Brant-Castellano reminded us, it is important to collect data over time. To understand the story as it unfolds, we need to gather information at various points during the life of the program and not just as it is ending. Collecting information over time is consistent with traditional knowledge creation. Most program stories predict some change will occur, so information collected at the beginning of the program (often called baseline information) is compared to the data collected during and at the end of the program. Both qualitative and quantitative information should be collected over the life of the program. Sometimes it is possible to continue collecting data after a program ends. For example, a tribal college may collect graduation rates or enrollment of four-year colleges for students who were involved in a freshman enhancement program after the program ended.

Developing Comparisons that Describe Change

When we create a design for the evaluation, we explain the methods we plan to use to capture information about change. The most common designs used to capture change collect quantitative information and make comparisons. Evaluations that make comparisons are useful in learning if and how the assumptions for change happened as the program is implemented.

One way to assess change is to gather baseline information and see if changes occurred by the end of the program. We can use regularly gathered information, such as students' GPA, graduation rates, and enrollment rates as baseline data and observe if changes occur in these measures as the program is implemented. Or we can create new ways to measure change. For example, we may want to know if student interest in science increased after exposure to field-based summer workshops. In such a case, we would measure the

students' interest in science through a type of instrument, such as an attitudinal assessment survey at the beginning of the workshop to collect baseline information. Then, we would give the students the same survey after the workshop and compare students' interest levels before and after the workshop to see if their attitudes changed. This is a pre/post test design.

Northwest Indian College Second Campus Planting Group

Another way to create a comparison is to set up a different design by giving a pre/post attitude survey to the students in the workshop and to another group of students who were not in the workshop. The second group is called a control group. Designs that compare two or more groups are either Experimental (individuals or groups are randomly selected) or Quasi-experimental (comparison is made within the same group or in a matched comparison group).

We could create a control group of students who do not go the summer workshop by choosing students from a different location or school that is similar to our location. Then we compare the two groups, hoping that those who took the workshop show greater interest in science after the workshop than before, and that their interest in also greater when compared to the students who did not take the workshop. This is a matched comparison group design (a quasi-experimental design). If we use a design that compares two different groups (one that is involved in the program and one that is not), it is important that the two groups are similar enough to make comparisons valid. For example, if only students who were good in science were in the workshop, it would be unfair to compare their interest in science to students who were not good in science. It is challenging to construct this type of design because finding a similar group and matching for comparable interest in science is difficult in small and remote reservation communities.

Another way to establish a comparison group is to randomly select students to be in the summer workshop from a large pool of

Diné College Students in Chemistry Lab

students (an experimental design). Those not selected cannot take the workshop. However, both groups would take the same pre-and post-science interest surveys to assess the differences or changes between the two groups' interest in science. This design is challenging because it is hard to get a large number of students randomly assigned to the workshop, and students and parents may object to withholding the workshop from some students while offering it to others.

These two designs attempt to compare two different groups of students; however, the students have to be similar to make the design valid. It is assumed that when students are randomly selected to the two groups, there is a comparable mixture of students who are good, average or poor in science. In Western science, randomly assigning people to two groups is considered the best way to make them as similar as possible.

Another comparison approach measures the same individuals or groups over time (time series designs). This approach involves a series of measurements at key intervals over time. For example, suppose a tribal college introduced a new curriculum to improve learning mathematics in beginning algebra courses. Testing can assess how much was learned in the courses; however, it might also be useful to measure whether the new approach to teaching algebra influenced student performance in subsequent mathematic courses. A series of measures could be taken to track student enrollment and successful completion of mathematic courses taken at the college prior to the new curriculum and for a couple of years after the curriculum was introduced. This would demonstrate any differences in successful completion of mathematic courses prior to and after the introduction of the curriculum, and it would track student performance throughout their college program.

If the evaluation design is going to make comparisons between groups or take measures over time, it is good to consult with a trained evaluator or someone who understands statistical procedures to ensure that comparisons will be valid. Three articles in the Readings section discuss issues in using experimental and quasi-experimental designs. Two are from the Northwest Regional Educational Laboratory. These discuss the challenges and opportunities for using experimental designs. The article by Willard Gilbert describes a study using a quasi-experimental design.

Current Federal Agency Preferences for Evaluation

Some quantitative evaluation designs use a Western science paradigm that attempts to prove that the activities in the program actually caused the desired outcomes. This approach to evaluation is referred to as scientifically-based research. A major function of this approach is establishing causation, or answering questions related to whether the program (and only the program) influenced the desired outcomes.

These quantitative approaches gather evidence by comparing the outcomes of the program to a control group that did not receive the activities or treatment embedded in the program. These evaluation designs are based on the following assumptions:

- Program factors can be isolated and objectified.
- Essential program factors can be quantified and measured.
- Control or comparison groups can be created that approximate the group receiving the program.

Evaluations based on this approach use experimental or quasi-experimental designs. In 2005, the U. S. Department of Education issued a statement that the Randomized Controlled Trial was the preferred design to assess the effectiveness of educational programs,

Reference

See Readings, articles illustrating the use of experimental and quasi-experimental designs: "Bridging Tribal Science Knowledge with Western Science—Preserving Native Cultural Knowledge while Achieving Academic Success," "Can Experimental Research Be Conducted with Culturally Based Education Interventions—An Assessment of Feasibility," and "Preliminary Study for Experimental Research on Culturally Based Education for American Indian/Alaskan Native Students."

such as those funded under the No Child Left Behind Act. The U. S. Department of Education often gives priority to programs that demonstrate experimental or quasi-experimental designs in their evaluations.

Other federal government agencies award up to 20 extra points to proposals that offer randomized designs. Some federal agencies require program proposals include established treatments in their program strategies that have been proven through evidence-based evaluations. Evidence-based usually means that the treatment in the program has been evaluated using an experimental design based on random assignment. Evidence-based programs are considered generalizable—meaning that once proven to work when evaluated using an experimental design, the program should work regardless of the community in which it is placed.

Indigenous evaluators are concerned with the current federal policies that give preference to one design or approach to program evaluation. The American Evaluation Association developed a formal response to federal policy makers that supports responsive use of evaluation designs based on the questions and purposes of the evaluation rather than assuming one design is preferable.

An Indigenous Evaluation Perspective

The assumptions that underlie the Randomized Controlled Trial approach to evaluation are not congruent with the values and beliefs that form the foundation of the AIHEC Indigenous Evaluation Framework. We are not interested in proving causality using this type of approach to evaluation. Rather, we are interested in learning whether our story unfolds as we predicted and whether the changes we sought happen. Nor are we interested in establishing evidence that the program we are implementing can be exported to other communities. From an Indigenous perspective, context is critical. Programs are understood only within their relationship to place,

Reference

See Resources, American Evaluation Association Pubic Statement.

setting, and community. In undertaking a new program, the focus is to understand its relevance to our community and place.

Experimental and quasi-experimental approaches present challenges to many of our communities. Analysis of data collected within an experimental and quasi-experimental design structure usually employ statistical procedures. These procedures require that groups be large enough (usually over 30 people) to ensure proper statistical analysis. Thus, if two comparison groups are formed, a minimum of 60 individuals are needed for a statistical analysis. Numbers of this size are often not feasible in small reservation communities. Also, as stated earlier, randomly assigning some members of the community to a program while withholding it from others is problematic in small communities.

Native American Week, Chief Dull Knife College

We may choose to use a comparison design based on experimental or quasi-experimental designs, but if we do, it is because it fits our situation and evaluation concerns.

Suggestions for Creating Comparisons

Some suggestions for making comparisons to measure changes in program outcomes include:

- **Collect baseline data on participants and compare changes over time**. This method is responsive to tribal programs interested in evaluating improvements or changes over time.
- **Administer a pre- and post-measurement**. This method uses the same instruments or tests to assess differences at the beginning and conclusion of a program.
- **Use retrospective measures**. This method allows participants to assess their own changes based on personal perspectives. The instrument to assess change is given at the end of the program and the individual rates how they perceived themselves to be at the beginning of the program compared to how they are at

Measurement and comparison may be important aspects of observaton in understanding individual and group experience if they fit the situation and community.

the end. This approach is useful when a pre-treatment assessment instrument might be intrusive or intimidating to program participants.

- **Compare one group with another**. For example, if a new curriculum in science is introduced in the ninth grade, measure 2009 ninth graders with 2008 ninth graders who did not receive the new curriculum.
- **Compare tribal statistics with national data**. Many national or state tests or surveys contain data disaggregated by ethnicity. In some programs, the data on American Indians contained in these data banks might be useful to compare to tribal data on the same measures. The National Assessment of Educational Progress (NAEP) and Trends in International Mathematics and Science Study (TIMSS) are often used for comparisons to a local group.
- **Find or create another group within the community or in another reservation community that will act as a comparison group**. If this method is used, it is important to negotiate an understanding with the partner reservation or community to ensure that all are comfortable with the use of a comparison model and fully understand how evaluation findings will be reported.
- **Qualitative data can also be used to describe the changes that are experienced in the program.** Participants can describe their perceptions of ways the program influenced or changed them. Drawings and images can be used to illustrate changes.

In the AIHEC Indigenous Evaluation Framework, measurement and comparison are important. They are aspects of experience and observation, and they help us understand individual and communal experience. However, measurement needs to be responsive to our values and cannot be so limiting as to be the only criteria on which we draw lessons or learning from program implementation.

Reference

See Resources, "NAEP, PISA, TIMSS: A Brief Comparison" and "The National Indian Educational Study 2007" which summarizes National Assessment of Educational Progress performance.

Practice Based Evidence

Many American Indian communities are not interested in statistical proofs that the evidence of program change was collected through a scientifically based research or a Randomized Controlled Trial design, making it generalizable to other communities. Project staffs want to be responsible to their own constituencies and to execute the evaluation in a highly professional manner. Testing a model for export to other communities is not part of the AIHEC Indigenous Evaluation Framework.

The AIHEC Indigenous Evaluation Framework supports practice-based evidence—information about the merits of the program that emerge from its implementation or its practice. It is from this evidence that we learn what is working or not working as we anticipated. This type of evidence is relevant to our desire to improve the quality of life and to increase opportunity in our communities.

Thomas Schwandt emphasizes in his article "Centrality of Practice to Evaluation" the need to value those who are engaged in delivering the program—the practitioners. He explains that practice-based evaluation leads to and "is open to critical reflection the kinds of knowledge that resides not in scientific statements of program outcomes and effects, but in practice."[26] This knowledge comes when practitioners reflect on the routines and every day actions of the program, the manner in which they engage with each other and with those they serve, their sense of comfort with their work and their relationships and trust with others in the program. It is this deep sense of reflection that Indigenous evaluation should foster. Creating opportunities in our evaluation design to reflect on learning from our every day action and presence is as important as measuring what is being done.

Bay Mills Community College Classrooms

". . . knowledge comes when practitioners reflect on the routines and every day actions of the program, the manner in which they engage with each other and with those they serve. . . ."

Reference

See Readings, "Centrality of Practice to Evaluation."

[26] Schwandt, T. A., "The Centrality of Practice to Evaluation,"in *American Journal of Evaluation*, vol. 26, no. 1, 2005, p. 89.

Looking to Our Own Ways of Knowing

Nakoda Elder Selena Ditmar
Fort Belknap College Board Member

When designing the approach and methods to use in an evaluation, decisions should be guided by our sense of community, its values and preferences. In addition to the aspects of design that are qualitative, quantitative or involve comparisons, we should also consider include methods that are uniquely suited to Indigenous ways of knowing.

Elder Knowledge

There is an evaluation design that uses expert judgment and relies on knowledgeable outsiders to render opinions about the program.[27] College accreditation processes include the use of outsiders who visit and, using the college's self-study, assess its programs against the standards for accreditation. Usually the prior experience and expertise of the outsiders gives their judgments value. We believe that this approach is important when considering an Indigenous framing for evaluation.

Elder knowledge is a form of expert opinion in our communities and is highly respected. Indigenous evaluators must not overlook the value of seeking elder opinions. Both qualitative and quantitative approaches can engage elders. For example, elders can serve as partners in the evaluation, or they can serve on advisory committees. They can be included in interviews or focus groups. They may also serve as judges in cultural demonstrations using a scoring rubric to assess student performance. However they are engaged, their contribution should be an important element of evaluation from an Indigenous perspective.

Reference

An example of guidelines for engaging elders is included in the Resources section. You can use these guidelines as a starting point, or you may have your own set of guidelines specific to your community.

[27] Described as an informal design in Weiss, C. H., *Evaluation: Second Edition*. Prentice Hall, Upper Saddle River, NJ, 1999, p. 189.

Knowledge from Spirits in Ceremonies, Visions and Dreams

Vine Deloria identified a third source of Indigenous knowledge, explaining that messages from spirits, ceremonies and dreams are other traditional ways of knowing. Some aspects of Indigenous evaluation go beyond conventional discussions of quantitative and qualitative approaches or comparison designs. We have referred to building the scaffolding to illustrate the extent to which evaluation has to embrace the structural frameworks of culture. In their article "Indigenizing Evaluation," Robertson, Jorgenson and Garrow quote Matthew Zack Bear Shield, a Lakota spiritual leader:

> When we followed the Lakota ways and spiritual laws of the universe, the people flourished. Because we went away from the Lakota spiritual calendar, our people suffer and are in chaos.[28]

This statement underscores the community's need to look to Lakota ways to go forward. To be fully guided by our cultural ways, Indigenous evaluation practice must honor spiritual protocols and calendars within the different tribal communities. The Lakota Project found its description in the metaphor raising the tipi because it was rich with the symbolism of cultural teachings, family responsibility, and living together peacefully. In choosing this metaphor, the elders were giving a definition to the evaluation that went beyond design and methods. The metaphor included spiritual and cultural grounding.

This same degree of care and consideration should be used when designing evaluation in any Indigenous community. Creating an Indigenous evaluation plan or scaffolding involves more than what is written on paper. It incorporates intangibles such as respect for elder guidance, prayers, and ceremony to guide the evaluation processes, and inclusive consultation and reflection. With this care, the proper designs will be chosen, designs that fit the context and ways of the community.

Remnants of Old Sweat Lodge (above) and Present DaySweat Lodge (below),.United Indians of All Tribes Foundation, Daybreak Star Center, Seattle, WA

Photos by Maria LaFrance

[28] Robertson, P., Jorgenson, M. & Garrow, C.,"Indigenizing Evaluation Research: How Lakota Methodologies Are Helping 'Raise the Tipi' in the Oglala Sioux Nation," in *The American Indian Quarterly*, vol. 28, no. 3 & 4 (Summer/Fall 2004), Univeristy of Nebraska Press, Lincoln, NE, 2004, p. 499.

FRAMEWORK

Building the Scaffolding

Responsive Information Gathering

Using Culturally Responsive Approaches

Creating the story for the program, establishing the focus of the inquiry, and designing the scaffolding are the initial essential steps in developing the evaluation plan. In this section, we describe three approaches to evaluation that are congruent with our values, identify methods for collecting data and offer suggestions for adapting them for our communities

> We have learned through the academic system to view evaluation from a negative perspective. It's always a deficit model. It's always starting from, "What's wrong with this picture? What's wrong with this student?" We forget that kids come to school with this prior knowledge, with this prior experience, never as a blank slate. People often say that children and students are empty vessels that have to be filled. When we look at evaluation from that perspective, there is something wrong with the student, there is something wrong with the program, there is something wrong with the community. The strengths that are there aren't seen. Our vision of what is going on gets clouded by that kind of perspective, and we miss what is really important, what is really building there or becoming.
>
> Focus Group Participant, Phoenix

As noted by a participant in a focus group, evaluation is often focused on a deficit or problem-based model of community development. Methods used to gather information on individual and community growth have failed to capture cultural or personal strengths. The AIHEC Indigenous Evaluation Framework should serve as a rudder to steer assessment and other data gathering activities towards our own considerations of how to understand the truth of a situation or setting.

Passing the Paddle, WINHEC 2008 Annual Meeting, Melbourne, Australia

"Our vision of what is going on gets clouded by a deficit model of perspective, and we miss what is really important, what is really building there or becoming."

Focus Group Participant

Haskell Indian Nations University Students

Through appreciative inquiry, we examine what is working and our strengths.

Looking to Our Strengths—Appreciative Inquiry

In the AIHEC Indigenous Evaluation Framework, we look to our strengths as a starting point for examining programs in our communities. We should promote affirmative processes for gathering data that stress strengths rather than weaknesses or problems. In doing so, we can use elements of a Western model called appreciative inquiry (AI). The AI process "inquires into, identifies, and further develops the best of what is in an organization in order to create a better future."[29] A basic premise of AI is that organizations will move toward what they study.

The AI approach to gathering information focuses on what is good and strong and explores what may be needed to build on strengths. It encourages the following types of evaluative statements or questions to guide inquiry:

- In looking at your experience in this program, describe a time when you felt most alive, most fulfilled, or most excited. As you share your story, consider what made it a high point, who was involved, what made it a good experience.
- Let's talk for a moment about some things you value deeply—specifically, about the things you value about yourself, your performance, your work, or this program.
- What do you experience as the core values and practices that give life to this program?
- If you could have three wishes for this program, what would you wish and how would the program be different if they came true?[30]

[29] Coghlan, A., Preskill, H., & Tzavaras Catsambas, T., "An Overview to Appreciative Inquiry in Evaluation," in *New Directions for Evaluation*, no. 11, Winter, American Evaluation Association, Fairhaven, MA, Wiley Periodicals, Inc., Wilmington, DE, co-pubs., 2003, p. 5.
[30] There is a good discussion and case studies on AI in the *New Directions for Evaluation*, vol. 100, Winter 2003, Jossey-Bass: San Francisco, CA.

Building Capacity—Empowerment Evaluation

Community engagement builds capacity in conducting evaluation and encourages ownership of the process. It creates an understanding of the importance of evaluation as a component of program implementation. Capacity is greatly enhanced when community members are directly engaged in conducting evaluation.

Another Western evaluation approach, Empowerment Evaluation is consistent with the AIHEC Indigenous Evaluation Framework. The CIRCLE Project evaluation on the Pine Ridge reservation used elements of empowerment evaluation and participatory action research models. Empowerment evaluation is designed to foster program improvement and self-determination by asking program participants (staff, clients, and other stakeholders) to help themselves through self-evaluation and reflection. It relies on both qualitative and quantitative methodologies.

Kyi-Yo Powwow at University of Montana

Empowerment evaluation is necessarily a collaborative group activity, not an individual pursuit. An evaluator does not and cannot empower anyone; people empower themselves, often with assistance and coaching. This process is fundamentally democratic. It invites (if not demands) participation, examining issues of concern to the entire community in an open forum.

Reference

See Readings, "Indigenizing Evaluation Research."

> As a result, the context changes. The assessment of a program's value and worth is not the end point of the evaluation—as it often is in traditional [Western] evaluation—but part of an ongoing process of program improvement. This new context acknowledges a simple but overlooked truth: that merit and worth are not static values. Populations shift, goals shift, knowledge about program practices and their value changes, and external forces are highly unstable. By internalizing and institutionalizing self-evaluation processes and practices, a dynamic and responsive approach to evaluation can be developed to accommodate these shifts.[31]

In empowerment evaluation, the evaluator serves as a coach or facilitator, guiding the program stakeholders through a series of steps. These three steps are: (1) establishing a mission or vision statement, i.e., identifying the results stakeholders would like to see coming out of program implementation; (2) taking stock or determining where the program stands, including identifying strengths and weaknesses; and (3) charting a course for the future, including stating goals and strategies with an emphasis on program improvement, as well as identifying the documentation required to monitor progress toward achieving the results stakeholders want to see.[32]

Empowerment evaluation has three key features that fuse the task of evaluation with that of capacity building:

1. **Helps create a constructive environment for the evaluation.**

   Community members are co-discoverers, along with the evaluator, of knowledge about the merits of the program. Because steps are outlined to make improvements to the program, any negative findings are dealt with before there

[31] Fetterman, D.M., Kaftarian, S.J., & Wandersman, A., eds., *Empowerment Evaluation: Knowledge and Tools for Self-Assessment and Accountability*, Sage Publications, Thousand Oaks, CA, 1966, p. 5.
[32] In its earlier conceptualization, empowerment evaluation used four steps: taking stock, setting goals, developing strategies, and documenting progress.

might be negative consequences for the funders or other authorities. As the emphasis is on program improvement, the evaluation should identify constructive partnership roles for the funders and other supporters.

2. **Voices of the intended beneficiaries are actively included.**

   Community members' voices give a sense of legitimacy to the inquiry; often, if the evaluation process does not pass muster with those who are supposed to benefit, findings can be dismissed as illegitimate. In this way, the experience, wisdom and community standards of excellence are acknowledged.

3. **Communities use the evaluation findings to strengthen community responses.**

   The lessons learned are spread throughout the community in various forums and media. This helps create links among people and other programs that can also use the information. The evaluation will help the community members strengthen the commitment they bring to their work, further develop their skills to make their work more effective, as well as increase the financial and other resources usable to strengthen their work.[33]

The description of the empowerment evaluation implementation described in the table on page 84 identifies principles of this approach. These principles are congruent with the core values of AIHEC Indigenous Evaluation Framework.

[33] Mayer, S. E. ,"Building Community Capacity With Evaluation Activities That Empower," in *Empowerment Evaluation: Knowledge and Tools for Self-assessment & Accountability*, edited by D. M. Fetterman, S. Kaftarian, & A. Wandersman, Sage Publications, Thousand Oaks, CA, 1996, p. 335-336.

Empowerment Evaluation[34]

PROCESS:

- A community should make the decisions about all or most aspects of an evaluation, including its purpose and design; a community should decide how the results are used (community-ownership principle).
- Stakeholders, including staff members, community members, funding institutions, and program participants should directly participate in decisions about an evaluation (inclusion principle).
- Empowerment evaluation should value processes that emphasize deliberation and authentic collaboration among stakeholders; the empowerment evaluation process should be readily transparent (democratic participation principle).
- The tools developed for an empowerment evaluation should reflect community wisdom (community-knowledge principle).
- Empowerment evaluations must appreciate the value of scientific evidence (evidence-based strategies principle).
- Empowerment evaluations should be conducted in ways that hold evaluators accountable to program administrators and to the community or public (accountability principle).

OUTCOME:

- Empowerment evaluations must value improvement; evaluations should be tools to achieve improvement (improvement principle).
- Empowerment evaluations should change programmatic behaviors and influence individual thinking (organizational-learning principle).
- Empowerment evaluations should facilitate the allocation of resources, opportunities, and bargaining power; evaluations should contribute to the amelioration of social inequalities (social-justice principle).
- Empowerment evaluations should facilitate organizations' and communities' use of data to learn and their ability to sustain their evaluation efforts (capacity-building principle).

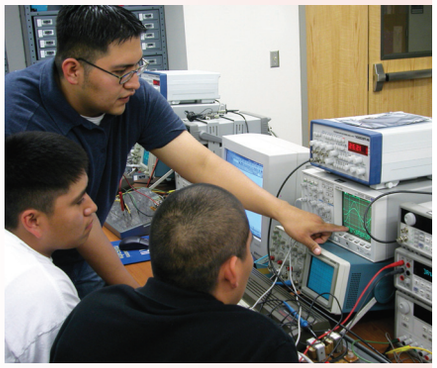
[34] Miller, R. L. & Campbell, R. ,"Taking Stock of Empowerment Evaluation: An Empirical Review," in *American Journal of Evaluation*, vol. 27 no. 3, September 2006.

Indigenous evaluation is by its nature a capacity building exercise. It is a framing and reframing process. As we explore and test ways to bring our values and beliefs into evaluation, we are building our capacities to own the practice of creating knowledge to go forward into the future. Similar to the principles outlined on page 86, two core principles of the AIHEC Indigenous Evaluation Framework are to broaden the role of community in the evaluation and to base the evaluation process on commonly held cultural values.

Institute of American Indian Arts

Similar to appreciative inquiry (AI) and empowerment evaluation, the AIHEC Indigenous Evaluation Framework encourages a focus on what works, which can then be examined to determine why it works and what is needed to maintain or increase the activities or behaviors that work. One Indigenous evaluator used a method of environmental scanning to examine those factors that facilitated program performance and success, then identified what factors were inhibiting program accomplishment. By identifying such facilitators and inhibitors, the program staff were then able to ensure that those facilitating factors were strengthened and that the inhibiting factors were handled in a way that they ceased to be problematic. This approach created a balance which made program staff aware of their strong points and identified areas that threatened program success.

Indigenous evaluation should lead us toward understanding how our cultural, community, and program strengths can move us forward. AI should be explored, and its philosophy incorporated into methods for gathering data. It affirms a tenet of Indigenous ways of knowing by recognizing the inter-relationship or co-creation of program knowledge through the interaction of evaluation with implementation. By using evaluation to help focus on our gifts and strengths, we are following the wisdom of the Lakota elder (quoted earlier) who said: "When we followed the wisdom of the Lakota ways we flourished."



Southwestern Indian Polytechnic Institute Students

Browning High School Student Project

Recognizing Our Gifts—Performance-based Student Assessment

Perhaps one of the more damaging experiences Native peoples have with evaluation is the use of assessments such as national or state standardized tests measuring academic achievement. These tests are often the only measures of student achievement considered when assessing student learning and are widely reported in federal and state educational statistics. Unfortunately, Indian and Alaskan Natives' scores are lower than most other groups. Given state and federal mandates in education, the use of some type of assessment instrument likely will continue. Many Indian educators, as well as the National Indian Education Association, have stated their concern with the reliance on standardized testing with Indian students, and thus, promote the notion that assessment should be expanded to ensure that our evaluations capture a full range of gifts and talents and do not rely only on limited state or national standardized tests. As noted earlier in the discussion of common values, we must address assessment in ways that respect the full dignity of our students. We need to emphasize that:

> The duty of all people is to assist others on their paths, and to be patient when their acts or words demonstrate that there are still things to be learned. The corollary duty is to avoid discouraging people by belittling them in any fashion and so reducing their respect and faith in themselves.[35]

In a statewide study of Alaskan Native student vitality, researchers interviewed Native Alaskan leaders, community members, and elders to learn how they defined Native student success. They learned that success engaged individual traits, skills in bridging two worlds, and ability to contribute to the community.

[35] Rupert Ross, p. 27.

They talked about individual success, about succeeding in bridging two worlds, and success in a community context. Most consistently, however, participants' own definitions of success centered on what it means to be a good human being. For these participants, a successful Alaskan Native student is one who can set and achieve goals because he knows his own worth and value, understands his responsibility to his community, and is prepared to pursue whatever life path he chooses.[36]

Since the 1980s, many educators have expressed dissatisfaction with the use of standardized tests as the primary indicator of student achievement. For more than 20 years, there has been a movement to create alternative educational assessment techniques and use of these techniques is becoming more widespread.[37] Among these alternative methods known as performance-based assessments, authentic assessment is the most widely known. It was developed by educators seeking forms of student work that reflected real-life situations, as well as strategies that challenged a student's ability to demonstrate what he or she had learned. The educators were interested in identifying an assessment system that provides information about specific tasks in which a student succeeds or fails—tasks that in, and of themselves, are worthwhile, significant, and meaningful. Performance-based assessment strategies may be more culturally responsive, as they are similar to traditional ways in which Indigenous communities have measured accomplishments.

In using performance-based assessment, students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills. Student performance is typically scored on a rubric to determine how successfully the student has met specific standards.[38]

College of Menominee Nation Chemistry Lab

The newer approaches to assessment in the education arena are reflections of values and practices that informed our traditional ways of assessing merit or accomplishments as they are based on performance and account for the variety of ways in which an individual can demonstrate his or her unique gifts.

[36] Villegas, M., & Prieto, R., "Alaska Native Student Vitality: Community Perspectives on Supporting Student Success," Alaska Native Policy Center at First Alaskans Institute, Anchorage, AK, 2006, p. 1.
[37] The National Coalition of Essential Schools is a good resource: www.essentialschools.org.
[38] An excellent discussion of authentic assessment, is Jon Mueller, "Authentic Assessment Tool Box," http://jonathan.mueller.faculty.noctrl.edu/toolbox/index.htm.


Sitting Bull College Environmental Studies

Performance-based assessment fits well with the Indigenous valuing of the unique gifts of every person. It provides an opportunity for a student to demonstrate what he or she knows and can do. The newer approaches to assessment in the education arena are reflections of values and practices that informed our traditional ways of assessing merit or accomplishments as they are based on performance and account for the variety of ways in which an individual can demonstrate his or her unique gifts.

In developing a performance-based assessment tool the following process is used:

- Determine what students know and are able to do;
- Establish standards for knowledge and skills. What is the level of proficiency needed to meet the standard;
- Develop authentic tasks that will demonstrate performance;
- Establish criteria for a range of performance levels and describe this range in a rubric, a list describing different levels of proficiency with the final level being the desired standard that students should meet; and
- Establish whether the student met the standard from a score on a rubric, and if not, determine how to help the student improve.

This approach can be used to assess both academic and cultural learning. Scoring is flexible and can be assigned to elders, members of the community, or educators. It also moves away from strictly using tests and fits well into Indigenous education models where learning is demonstrated through doing.

The use of portfolios that show samples of each student's work is another performance-based assessment method. For example, portfolios are used to show examples of how a student's work has

improved and his/her skills have grown. This practice is consistent with Indigenous values, as it showcases the various talents and gifts of students. A portfolio is a collection of a student's work which is "specifically selected to tell a particular story about the student."[39] It is not just a large collection of work completed by a student, but a carefully selected sample of work. The portfolio should be developed to celebrate each student's gifts; it can demonstrate worth without requiring uniformity on all elements to be showcased.

Sisseton Wahpeton College Children's Program

Assessments that engage youth in creative activities are powerful indicators of learning. A program in Minnesota, designed to prevent tobacco abuse, used an innovative participatory action method developed by Caroline Wang called Photovoice.[40] The youth were given cameras and asked to take pictures that illustrated messages regarding tobacco dependency. Their pictures were rich in stories and lessons. One showed a woman so desperate to smoke that she is leaning over the burner on her stove to light her cigarette. Another pictured a pile of cigarette butts in an ashtray. One set of photos depicted pictures of children dancing at a powwow with the message of protecting them from tobacco smoke so they can grow up and carry on tribal traditions. Another photo showed one drummer lighting up and

[39] J. Mueller, Ibid.
[40] For more information on Photovoice, see www.photovoice.com.

Rich White, United Tribes Technical College

commenting that most others at the drum would soon follow his lead and start smoking cigarettes. In the Photovoice technique, both the pictures and the youths' written stories of reasons they chose to take each photograph were used to assess their learning. A set of the photos was then made into a calendar that included information about traditional uses for tobacco and contemporary facts related to abuse of tobacco.

Linking Assessment and Culture

Science fairs are common demonstrations of authentic learning practiced in many of our schools. One focus group participant shared the following story to illustrate an important lesson.

> I was at a native science fair. . . . To enter that particular competition, the students' projects had to be culturally relevant in thought, not only the subject but in design and how they thought about it and what was its purpose and place. One young man had a project about corn and corn grinding. He compared the traditional method with newer machines for corn grinding. It was a wonderful project. In his hypothesis, he was looking at productivity and trying to determine which produces more [corn meal]. But in his design, which included interviewing the elders, interviewing the corn grinders who are typically women, he ended up learning, as a young male, how to sing the songs, the corn grinding songs (which the women sing while grinding). He looked at the way that there was not one stone that they used for grinding, there were four of them, and they each passed on that corn to the others. They would do this part, and then the next person do the next stage and the third stage and the fourth stage, and in that bonding, they sang their songs together and they connected, and he learned so much about that.
>
> We asked him about his song. He said that he had videotaped the women, and he asked them questions about the impact and the meaning of the song. Then he said, "It's not about productivity. I

thought it was. But it's really about connectedness to the land." He knew the history and where the corn came from and how he inherited that. He knew the songs. He learned the songs with it. He learned the process. He knew that it was much better to stay connected. How they used it for prayer, and how they used it in their food. He was so wonderful in his project.

I asked, "What is it you want to say to your people? What is your research? How would you tell them"? He said, "I'd tell them, 'Get rid of those machines. You don't need them. What you need is a way that you communicate to each other and you stay connected to that process, and we shouldn't lose that.'" It was not just the fact that he knew science; they all knew the Western science method of preparing for the science fair. But they could think about it in terms of how to approach it and teach it with reverence and respect, and how could you be a change agent in that sense. To other people, to the Western thinkers, it would have been about productivity and how to get more from that corn. And he could get more. He could see that scientifically, but what was being lost was that connection to our place and what we needed to do in our purpose for life.

Focus Group Participant, Phoenix

National Museum of the American Indian Opening Ceremonies

In the focus groups, many Native people explained that to determine merit or worth one needed to learn how to become a good person and to live up to the talents that one is given, while also giving back to family and community. Finding one's foundation and seeking balance and harmony are consistent themes. In conducting evaluations, we need to seek ways in which these qualities are assessed. The story of the young science fair student illustrates how he came to understand values within his culture. By being asked, "What do you want to say to your people?" he was challenged to think about sharing what he learned. Indigenous evaluation embraces assessment practices that include using elders to review and comment on student or program participant performance. Programs that engage students in educational activities that involve learning about

Taora Royal Smudging, WINHEC 2008 Annual Meeting Opening Ceremony, Melbourne, Australia

Smudging Fire, WINHEC 2008 Annual Meeting, Melbourne, Australia

Reference

See Resources, "Methods for Gathering Information" from the National Science Foundation and Cultural Considerations table for Gathering Information.

the local area should be encouraged to share findings with tribal councils or other groups in the community. Assessment should be more than evaluating individual growth. It should also include ways to measure and demonstrate benefits to the group or community.

Setting a Proper Tone and Respecting Cultural Protocols

Much of the time involved in conducting an evaluation involves collecting information using various methods such as interviews, surveys, tests, or observations. A list from a National Science Foundation evaluation handbook describes the advantages and disadvantages of the different methods. However, we believe that Indigenous evaluation should consider ways to incorporate cultural appropriate practices into any of the methods for gathering information. In this section, we discuss how cultural protocols that establish respectful communications should be used in evaluation.

In traditional Western evaluation practice, the role of the evaluator is to make judgments regarding relative merit or worth of a program. However, in the discussion of Empowerment Evaluation, it was noted that the role of the evaluator is that of a coach or facilitator among various stakeholders. Similarly, a primary role of the Indigenous evaluator is to serve as a facilitator to assist stakeholders in making the journey toward knowledge creation. In this way, the evaluator engages the community of stakeholders and, together, they are co-creators of evaluation knowledge.

Cultural Discussion Protocols

As Indigenous evaluators and educators, we recognize that each of our cultures has traditional methods for discussing various topics. We also recognize that the ways in which community members talk to

one another often differ from those of the non-Indian communities which might be adjacent to us. We can use our ways of talking to one another, based on our cultural norms and values, to facilitate evaluation.

AIHEC 2007 Stick Game Competition, Fort Belknap College

A focus group participant from a Pueblo tribe offered this discussion protocol as an example of how an Indigenous evaluation conversation might start:

> In our traditional ways, community deliberations are guided toward coming to consensus. After opening with a traditional prayer asking the Creator and ancestors for guidance, we then proceed through a set of questions that respectfully ask:
>
> 1. "Why are we here?" To establish the discussion purposes.
> 2. "What are we going to talk about?" To establish the issues under discussion; or "What is the work we have before us?" To clarify expectations.
> 3. "How are we going to work together?" To establish a common understanding of the approach and strategies to be used in order to clarify any questions about how to proceed.
> 4. "What do you think about this?" which provides each participant an opportunity to say, "This is how I feel," "This is how I see things," or "It seems to me."
> 5. Ultimately, the questions move the dialogue from "How do you feel?" to "How do we feel?" To move toward consensus.

For an Indigenous evaluation purpose, this method of discourse might be used over several focus group sessions to allow for building consensus about various aspects of the program evaluation or for allowing people to express differing viewpoints in a respectful manner.

Setting the tone of the discussion is important in Indigenous evaluation. The use of cultural protocols—such as the opening prayer—and the use of **respectful language** are based on tribal behavioral norms. These may differ from tribe to tribe. It is the evaluator's role to be familiar with these. For example, in many Pueblo communities, a person should preface his conversation with the Native equivalent of the term *with your permission* before addressing stakeholders.

Timing of evaluation conversations is also critical. The evaluator must search for potential evaluative openings within the conversation to elicit further information that may provide particular insights to the group. It may be considered rude to ask a number of questions, especially if the information being sought can be considered as soliciting criticism or negative perspectives. The evaluative discussion may proceed organically, rather than through a linear set of questions, as is the case in most Western focus group directions. We have a responsibility to engage the evaluation conversation within the protocols appropriate to the community and to our goals for the evaluation.

Talking Circles

The use of the Talking Circle—while not a specifically Pueblo discussion protocol—is also another Indigenous practices that can be adapted to an evaluation purpose. One Indigenous evaluator used the Talking Circle process to elicit information from individuals in a group setting. In this technique, the evaluator may pose a question to participants who then may respond in sequence around-the-circle or may choose to pass until they feel confident they can answer substantively. Participants are not pressured to respond and everyone is given a chance to respond as the discussion moves around the

Reference
See Elder Knowledge, page 78.

circle. Sometimes, a talking stick or a feather is used to signify who has the opportunity to speak; once that person has spoken, he/she may pass the stick on to the next person or ask, "who wants to speak next?" and the stick is passed to that person.

WINHEC 2008 Annual Meeting Opening Greetings, Melbourne, Australia

Another Indigenous evaluator in New Mexico used meetings with extended family groups as a culturally appropriate way to collect information for one project. In the past, when door-to-door surveys had failed to elicit substantive information, large community meetings were tried, however, they drew little attendance or turned negative. It was determined that going to extended families was a more effective way to elicit the information needed by the project for its evaluation.

Visiting—A Culture-based Data Gathering Method

One Indigenous evaluator in Montana is developing a culturally appropriate way of collecting information. In developing her methodology, she and her evaluation team asked themselves, "How did we traditionally go about getting information when our communities needed it?" They rediscovered visiting, i.e., relatives would go from house-to-house visiting, discussing the subject that concerned the community, and coming to degrees of consensus on how to handle the subject. The team will use visiting as a method to collect data for their evaluation.

Holiday Gathering, Fort Berthold Community College, 2007

Dr. Iris PrettyPaint described *Aoksisawaatsiiyo'p*, the Blackfoot Visiting Methodology, which emerged from the Blackfoot Project, or *Ihto'tsii Kipaitapiiwahsinnoon* (Coming from Within):

> This collaborative initiative includes 49 members of the Blackfoot Confederacy, over half of whom are women. The primary purpose of the project is to increase the number of Blackfoot Confederacy members in graduate school. The Project is interested in doing collaborative tribal community-based research to complete degree requirements and use Indigenous methods for data collection and analysis. The project identified four core research issues, including the rediscovery of Blackfoot inherent values, particularly the Blackfoot language; the acknowledgement of traumatic stress, which permeates the fabric of Blackfoot families and communities; and the limitations of the political system to strengthen the Blackfoot people.
>
> Built on the foundation of the Blackfoot culture, the Blackfoot Visiting Methodology (*Aoksisawaatsiiyo'p*) extends beyond Western qualitative inquiry to explore the Blackfoot speaking voices that inform a deep understanding of the language, land, history, meaningful relationships and a sense of place. We recognized the importance of selecting a method that matches our core research issues, forms of analysis and the way we want findings presented.
>
> The Blackfoot Visiting Methodology recognizes the interconnectedness of families and the natural process of building rapport to discuss sensitive issues. This Indigenous method promises to identify community based interventions that are sustainable because they have been developed with community engagement. Further development will enhance the scientific rigor of the method and improve the project's ability to study, understand, and rectify complex community research issues.
>
> Dr. Iris PrettyPaint

Considerations in Conducting Surveys, Interviews, and Focus Groups

The most common methods for collecting data are surveys to be filled out by a person, interviews (which can follow a survey structure or be open-ended), or focus groups. To become responsive Indigenous evaluators, we need to continually consider how our communities operate and to ensure that we respect community norms and values when using these methods. In this section, we offer suggestions based on information shared at the focus groups and from the experiences of Indigenous evaluators.

Determine Who Should Provide Information or Where or When to Collect Information

Selecting the people who will provide information is important. A good evaluation carefully considers the number of people who provide information and the criteria used to select the sources of information. Various quantitative assessments of student or participant knowledge gained through participating in a program, or via a questionnaire rating satisfaction, might be collected from all program participants. However, in programs that have large numbers of participants, it is possible to collect information from a smaller portion of those engaged in the program. This smaller group is called a sample of the population. Samples are used for both qualitative and quantitative data collection methods.

Different strategies may be used to select a sample population from which to collect information. Some evaluation designs require use of random selection. Even a qualitative method such as interviewing could rely on a random process to choose who will be interviewed. However, qualitative methods usually rely on purposeful sampling. This type of sample is defined by criteria to select the best set of people to include when collecting data.

Data Gathering

- *Use community members*
- *Expect the unexpected*
- *Use responsive consent processes*
- *Construct questions carefully*
- *Take your time*
- *Build relationships*
- *Consider language issues*

The criteria for determining from whom and when information is collected should make sense for the program and should be designed to generate information from a good representation of participants. For example, a program serving youth in a summer educational camp may want to include both those youth who completed the summer-long programs as well as a few people who dropped out before the camp ended. Choosing times and locations in which to do interviews, focus groups, or observations is also an aspect of sampling and should be based on criteria to ensure the data collected provides a fair view of the program.

Understand The Community

Individuals preparing and conducting interviews and surveys should have a knowledge and understanding of the community and culture. Often different discourse styles exist between non-Indians and Indians in response times, vocabulary, and protocol. Non-community members conducting interviews or surveys could be viewed as rude or abrupt if they did not spend enough time establishing rapport with those being interviewed. However, some interviewers could be viewed as taking more time than necessary. Interviewing styles truly depend on the community and its particular culture.

Involve Community People

People from the community should be used whenever possible. However, it is important that interviewers be trained in conducting the interviews or surveys. They should be given consistent information on the purpose of the survey or interview so that they can build a common understanding of the reasons for the data collection. They also must be able to assure those interviewed or responding to a survey how the data will be used and the way in which confidentiality will be protected.

Allow Time to Establish Relationship

Taking time to make personal contact is often needed to establish a relationship. If an evaluator plans to disseminate a survey form, it is important that some prior contact has been made so that community people are aware of the survey and understand why it is being conducted. If the evaluator or interviewer is not from the community, it is good practice to have an introduction to the people in the community. A letter from the tribal leadership sent to households explaining the purpose of the evaluation or the survey can sometimes alleviate this problem.

"One of the things I think is important in a community when you're doing interviewing is to engage the community in dialogue. . . . if you're interviewing someone, you have to allow them to guide the dialogue. . . . Let them tell you what's important."

Focus Group Participant

Take Care in Constructing and Asking Questions

Evaluators must not include certain value-laden questions in a survey. These questions may not be answered, or they may generate incorrect feedback and endanger the validity of the data. Some evaluators, when working in non-Indian communities, may use questions that are intended to create internal checks to ensure validity. In Indian communities, such questions may be viewed as misleading and dishonest and should be used with care, if at all.

Often, in tribal communities the use of direct questioning is discouraged when interviewing community members:

> One of the things I think is important in a community when you're doing interviewing is to engage the community in dialogue. . . . if you're interviewing someone, you have to allow them to guide the dialogue. . . . Let them tell you what's important. You shouldn't decide what's important for them. They're the ones who should set the agenda and tell you what's important. Don't assume that you have all the right questions. In fact, one of the things that you might be looking for is the right questions. The most valuable thing you come out with might be the ability to ask the right questions. It's respecting the fact that members of the community

have knowledge and trying your best to understand the knowledge that they're going to impart. Make them the teachers [not you].

Focus Group Participant, Phoenix

The issue of what types of questions are most useful from an Indigenous evaluation perspective is important. One Indian evaluator, when working in his own community, wanted to use forced-choice items rather than open-ended questions to make the data analysis a simpler task. He even attempted to have his program workgroup, which consisted of community members, help with developing potential responses, and he included a section for a response of Other, with space to provide an answer not contained in the given choices. In keeping with the value of centrality of community and family, the group consensus was that it was very important to give community members the opportunity to provide the answers they wanted to give and that the forced-choice would constrain them. The open-ended survey resulted in an abundance of responses, with some respondents providing attachments to the survey to clarify their answers. Analyzing this information became much more time consuming, but ultimately it was a more valuable experience.

Finally, consider how to avoid using a question/answer format. Explore ways to engage in conversation without having to focus on a question type protocol. Using evaluative statements such as those illustrated in the section Creating Our Story should be considered. This may be especially important when seeking information from elders and traditional leaders.

Consider Language Issues

Factors that may appear straightforward and non-controversial need to be addressed. For example, make certain that Native

language terms are correct and spelled in such a way as to be understandable. Many examples exist where an evaluator misspelled the name of the tribe or language. It is important to have Native language speakers conduct the interviews or surveys in some Indian communities, especially when dealing with elders.

Use Responsive Consent Processes

Evaluation may be subject to review from an Institutional Review Board (IRB) at the tribal level or at the college. The article "Researching Ourselves Back to Life" describes tribal review processes. If the evaluation does not go through a formal IRB, it is important to ensure that all those providing information give their consent for the information to be used in the evaluation. However, when seeking consent, there are a number of issues to consider.

In Western evaluation practice, signed consent forms are usually required to assure that respondents have a clear understanding of the purpose of the interview or survey. In all cases, preliminary consent—before the interview or survey—should be sought. In general, formal consent processes required by universities or federal agencies mandate that a person sign a form explaining the purpose of the evaluation, reasons for the interview, assurances of confidentiality of the identity of the interviewee, and contact information for the people responsible for the evaluation.

These formal regulations do not always apply when interviewing and interpreting information in Native communities. For example, evaluators in Alaska found that noting yourself, your family, and homeland are important in Native cultures. When gathering stories from Alaskan Natives, many wanted to have their names attached to their stories. They believed their stories of resilience in maintaining a

Fort Belknap College Students

Reference

See Readings, "Researching Ourselves Back to Life: Taking Control of the Research Agenda in Indian Country."

Deborah His Horse Is Thunder, National Museum of the American Indian Opening Ceremonies

sober life should be part of the communities' collective knowledge. When the participants were assured that all the data for the evaluation project would be destroyed in five years, many objected. They did not understand why their story would not be shared and become part of the accumulated knowledge of the community. It took a negotiation of formal university regulations to allow participants to choose whether or not they wanted to attach their names to their stories.[41]

Occasionally, use of a printed form is problematic. It can be viewed as too official, putting distance between those interviewed and evaluation team members that work closely with the community. In this type of situation, using an oral consent process may be preferable. Regardless of the process, it is important to inform those from whom information is gathered of the reasons for the evaluation and why their information is being sought.

For evaluation plans that are subject to a tribal or community review board or committee, the process used to gain informed consent will need to be approved by those bodies.

We strongly encourage that when a quote or story is used in any public report, time must be taken to double check with those interviewed, to ensure that they approve of the way in which their words are being interpreted.

Provide Incentives and Give Gifts

When we ask for information, we receive an important gift from our community members and program participants. We should practice the value of reciprocity. Offering an incentive, such as a gift

[41] Mohatt, G. & Thomas L. R., "I wonder, why would you do it that way: Ethical dilemmas in doing participatory research with Alaskan Native communities," in *The Handbook of Ethical Research with Ethnocultural Populations and Communities*, J. Trimble & C. Fisher, eds., Sage Publications,Thousand Oaks, CA, 2006, p. 93-115.

certificate to a popular store or cash, should be considered when asking people to take time to participate in a focus group or interview. A small gift, such as a bookmark or a key chain or token from the culture, will always be appreciated. It is a way of giving back for time respondents have contributed to the data collection efforts. Of course, one of the most significant gifts to a community is an evaluation conducted in a culturally responsive manner that provides rich information and stories from which the community can learn and move forward.

Be Prepared for the Unexpected

Conducting interviews and surveys can be exciting and challenging, given the realities of reservation life. It is important to brief interviewers on strategies for handling difficult situations. In some evaluations, trained interviewers from the community have met with threats when approaching a household, even finding themselves at gunpoint.

Occasionally, evaluators will have to deal with factions within a community. It is important to take this into consideration when assigning blocks of households. To mitigate this, conduct interviews through extended or large family groups.

FRAMEWORK

Responsive Information Gathering

Planning, Implementing and Celebrating

In the former sections, we described the major elements needed to plan an evaluation: creating and connecting the program's story, identifying key questions, constructing the design, and considering the approaches and methods for gathering information. In this section, we put these elements together to develop the evaluation plan and describe analysis and our learning. As we move forward in evaluation planning, we also consider how the plans will reflect our cultural values and beliefs.

Krisna LaFrance, Daybreak Star Center, Seattle, WA
Photo by Maria LaFrance

Reflecting Cultural Values and Beliefs

Indigenous evaluation requires an ongoing reflection about cultural values and community protocols. The AIHEC Indigenous Evaluation Framework describes Indigenous ways of knowing and four core values that guide our approach to evaluation planning. Throughout the planning and implementation of an evaluation, we should always consider how we are incorporating these values into an evaluation. This reflection is not linear, and aspects of planning will overlap. For example, we may have developed evaluation questions and outlined the plan, but we also might examine our planning in light of the core values (either those in the *AIHEC Indigenous Evaluation Framework* or those identified in the community) and make changes to better reflect these in the plan. Or we can begin by exploring our core values and describe ways to develop and implement the evaluation.

In our example, we have taken the summer youth employment program and examined how we will incorporate elements of Indigenous ways of knowing and the core values of the AIHEC Indigenous Evaluation Framework into the evaluation. The table on the next page lists these elements and describes how the evaluation addresses them. It may not be possible to address all elements, but it is important to take time to reflect on how our values are realized in the evaluation.

Reference

See Resources, University of Alaska GK-12 Evaluation Plan for an example of connecting evaluation planning to core values.

Beliefs and Values (AIHEC Framework)	Plan for Connecting Values to Youth Project
Indigenous Knowledge Creation—Context is Critical • Evaluation becomes part of the context, it is not an external function; and evaluation knowledge is used to better understand and improve programs. • Evaluators need to understand the relationships between the program and community. • Mixed methods—qualitative and quantitative approaches should be used. • Care must be taken that specific variables are analyzed without ignoring the contextual situation.	The evaluation and program evaluators were part of the program from the beginning, being included in proposal development and in meetings and workshops during the planning of the program's implementation. Findings of the evaluation will be used to improve the program. The evaluation used mixed methods: qualitative methods such as interviews and focus groups, as well as surveys and record reviews to create the program's story.
People of a Place—Respect Place-based Programs • Honor the place-based nature of many of our programs. • Describe the program's relationship to the community, including its history, current situation, and the individuals affected. • Respect that what occurs in one place may not be easily transferred to other situations or places.	The evaluation will describe findings within the community's context, noting the history of graduation rates, youth employment, and other salient factors. Although the program may discover useful youth employment practices, it will not assume that these fit other situations. The unique qualities that lead to success such as range of possible employers on the reservations are not transferable to other settings.
Centrality of Community and Family—Connect Evaluation to Community • Engage community when planning and implementing an evaluation through use of participatory practices that engage stakeholders. • Make evaluation processes transparent. • Understand that programs may not focus only on individual achievement, but also on restoring community health and wellbeing.	The program will have an advisory committee whose members include representatives from the reservation's businesses, youth serving programs, the school and Elders. This committee, with program staff, will participate in planning the evaluation. Consideration should address linking the summer youth involved in employment with other programs that can support successful school achievement, such as tutoring and bridge programs.
Recognizing our Gifts, Personal Sovereignty—Consider the Whole Person when Assessing Merit • Allow for creativity and self-expression. • Use multiple ways to measure accomplishment. • Recognize that people enter programs at different places and with different skills and experience. • Make connections to accomplishment and responsibility.	The experience and performance of the youth are measured in multiple ways. Employers describe youth performance and youth describe their experience to the advisory committee and community at a summer-end feast celebrating the program. Attendance and GPA records also describe youth's progress throughout the year.
Sovereignty—Create Ownership and Build Capacity • Follow Native Institutional Review Board processes. • Build capacity in the community. • Secure proper permission if future publishing is expected. • Report in ways meaningful to Native audiences as well as to funders.	Local tribal college students will learn important research skills by assisting in data gathering and youth interviews, and working with the evaluator to transcribe and code interviews. A community feast will be held in the fall to explain some of the findings from the evaluation, and to have youth describe and demonstrate what they learned during the work experience. Employers, youth and others who contributed to the program will be honored.

Shaping the Evaluation Plan

An evaluation plan is a blueprint that describes the ways in which we capture information to tell our story. A useful way to outline the plan is to create a table that describes how the evaluation will be done. The first step in developing the table is to list the questions or evaluative statements that are important to address while implementing the program. These questions will guide the design and the methods used to gather information. For example, our questions or statements will suggest whether we need to use quantitative or qualitative approaches and if we need to create a design that incorporates a comparison. Once we determine our approaches, we then define the data gathering methods. Sometimes the plan can also describe the source of the information and a schedule for data collection. The evaluation plan consists of:

- Major evaluation questions/statements that the evaluation will address.
- Approaches to gathering information to be used (qualitative information describing experiences or assessing changes; quantitative information describing progress and/or measuring changes).
- Specific methods for collecting information.
- Sources for the information.
- Timeline or schedule for collecting information.

The plan can also include who will be responsible for various evaluation activities. If we were to create an evaluation plan for the summer youth employment program, the first element is the over arching questions or evaluative statements (previously stated on page 60) as follows:

Key Question	Evaluative Statement
How many youth participated and did those participating meet the demographics of the program?	We want to know who participated and whether they were the youth for whom the program was designed.
How satisfied are the youth and the employers with the project?	We need to understand the experience of both the youth and employers and whether each was a good experience.
Were any of the youths' work habits carried over to their school behaviors?	We want to follow our youth after they return to school. We want to see if the program changed their attendance and academic performance.
What major lessons were learned from the summer experience?	We have lessons to learn so we can continue to improve this program when it is offered next summer.

These questions/statements provide the structure to our evaluation plan. We can consider the information we need and the ways in which we can gather this information to address each question. It may be useful to build our plan using each question/statement as the initial guide, and then add more detailed questions to shape our inquiry. The following table illustrates an evaluation plan that includes our questions, approaches, methods, sources, and schedule.

Evaluation Plan for Summer Youth Employment Program				
Questions/Statements to Guide Our Inquiry	**Evaluation Approach/ Design**	**Data Gathering Methods**	**Source of Information**	**Schedule or Timeline**
How many youth participated and did those participating meet the demographics of the program? **We want to know who participated and whether they were the youth for whom the program was designed.**				
Who enrolled?	Quantitative	Enrollment application	Students	May
Information on age, grade level, career, interests, family size & income.	Quantitative	Enrollment application	Students	May
How were youth recruited?	Qualitative	Interviews with program staff	Staff	May
What was the attendance for the job-skills training sessions?	Quantitative	Attendance records	Staff	Collected for each session
How well did the youth attend to their jobs?	Quantitative Qualitative	Attendance records Interviews	Employers Employers	Collected weekly Conducted in August
How many youth completed their job placements?	Quantitative	Attendance records	Employers	Collected weekly
How satisfied are the youth and the employers with the project? **We need to understand the experience of both the youth and employers and whether each was a good experience.**				
How do youth describe their experience with the project in terms of: satisfaction, learning about work skills and career development?	Qualitative	Interviews	Students	Conducted in August
How do the employers describe their experience with the project in terms of student's work, their relationships with the students, interest in continuing with the project?	Qualitative	Focus group	Employers	Conducted in August
Were any of the youths' work habits carried over to their school behaviors? **We want to follow the youth after they return to school to see if the program changed their attendance and academic performance.**				
Have the youth demonstrated better school attendance?	Quantitative	Baseline attendance (school year prior to summer program) compared to subsequent school year	Student records	January & June–following year
Have students demonstrated better school performance?	Quantitative	Baseline GPA (school year prior to summer program) compared to subsequent school year	Student records	January & June–following year
Have students indicated interest in educational planning for future careers?	Qualitative	Interviews Interviews	Counselors Students	January & June–following year

Evaluation Plan for Summer Youth Employment Program (cont.)

Questions/Statements to Guide Our Inquiry	Evaluation Approach/ Design	Data Gathering Methods	Source of Information	Schedule or Timeline
What major lessons were learned from the summer experience? **We have lessons to learn so we can continue to improve this program when it is offered next summer.**				
Is there any relationship between youth demographics (age, school attendance, performance, home address) and their successful participation in the program?	Quantitative Qualitative	Analysis of demographics with work attendance & student and employer interview/focus group data	Students Employers	June following year
Is there any relationship between job placement and youth participation in the program?	Quantitative Qualitative	Analysis of job placement with work attendance & student and employer interview/focus group data	Students Employers	June following year
What lessons were learned from the perspective of staff, students and employers?	Qualitative	Interviews Interviews Focus group	Staff Students Employers	August

The goal in building the scaffolding for the evaluation is to produce a blueprint that includes the direction for the inquiry and the approach and methods to be used. The table in our example is one template on which to build the blueprint. However, we do not recommend only one format to organize the evaluation direction, methods, and schedule. The matrices used should fit the ways in which the staff and other stakeholders prefer to construct.

Not all of the information we want to consider can fit into the table. In addition to a table that serves as a blueprint, the evaluation plan should describe ways in which program staff or community members might be engaged in doing different tasks, or how an external evaluator will be engaged. It could also describe how capacity could be built by explaining that an external evaluator will train tribal college students in how to conduct a focus group and supervise their work as data gathers. The evaluation plan should include all the elements of good Indigenous evaluation practice

through combination of tables and narratives that describe how the evaluation will be done.

White Clay Language Retreat, Fort Belknap College

Interpreting the Information

Vine Deloria reminded us that: "The old Indians were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if is to be useful, was directed towards that goal."[42] To honor our traditional ways of knowing, we are responsible for carefully interpreting our experience, celebrating what we have learned, and using the knowledge we gain to move forward.

To interpret the information, we need to analyze our data. In general, the goal when analyzing the information is to reduce it into numerical or narrative summaries that capture the essence of the information. As we analyze the information, we must consider the many audiences with whom it is to be shared. Our first concern is to distill information so it is understandable to our own community and program participants. The analysis shared with our community may differ in its scope and emphasis from the analysis that is shared with funders, although both will be based on the same overall analyses of our program data. The ways in which the information is analyzed depends on the methods used to collect the data.

Science Classroom, Chief Dull Knife College

Analyzing Qualitative Information

For qualitative information (words, stories, and documents), analysis usually involves reading the words, listening to recordings of interviews, viewing images on a video, noting what is being said, then organizing the information. Often a coding system is used to sort the narrative data. The codes can emerge from the data, or they can be established in advance.

[42] Deloria, Jr., V., *Spirit and Reason: The Vine Deloria, Jr., Reader*, Fulcrum Publishing, Golden, CO, 1999, p. 49 & 52.

Southwestern Indian Polytechnic Institute

For example, when coding transcripts of interviews of participants in a summer science program, pre-established codes might be used such as: **those that are critical or negative** and **those that are positive**. Notes from the transcripts of the interviews are listed under each of the two categories. Alternatively, as the transcripts are read, the analyzer may start listing patterns of information that emerge from the readings: for example, **comments on field experiences**, or **comments on guest speakers**, or **comments regarding the scheduling**. These simple coding schemes begin to sort the information. Further sorting can occur within each coded category to reveal more detail from the data.

Once the information is sorted, the analysis summarizes the information based on the coding system or other means for organizing the information. The summaries explain the overall quantity of information within a coded area. For our example we might report that **75% of those interviewed had comments regarding the scheduling of summer camp and of these, the majority expressed concern that too many activities were planned for each day**.

In reporting the summary of the coded information, descriptions and summaries of the various categories are often illustrated with a direct quote. These quotes give life to the summary by allowing the voices of those who contributed the information to emerge. Of course, if confidentiality is important to protect, the quotes should not identify the speaker. Further, those who are quoted should have an opportunity to read their words prior to publication. In some cases, the speaker may want to be identified in the report. If so, consent for the use must be clearly documented.

Qualitative analysis can be time consuming. It often requires that any recorded information be typed into a written transcript. Sorting

information and organizing into codes requires a concentrated effort of carefully reading the information and thinking about how to organize it. As noted above, in a survey that used open-ended questions (different words written in response to questions), more time was consumed to sort and categorize than a closed question that asked for a rating or ranking number. A number of electronic programs facilitate qualitative data analysis; however, they are costly and require training to use.

Haskell Indian Nations University Classroon

It is important to describe the analysis process when reporting the findings. For example, how were the codes determined and who did the coding? Did more than one person code information? If so, did they tend to agree on the information that was categorized into the coding system? By describing the process, the analysis is more transparent and the summary of findings will be more credible.

Despite the challenges of analyzing qualitative information, it is essential to telling the story of a program. It gives a face and voice to our story, and describes relationships and experiences that cannot be captured with numbers, percentages and scores, and provides stories that we can share and celebrate with our community.

Analyzing Quantitative Information

Since quantitative information yields numbers, the analysis involves summarizing numerical information. Just as in the analysis of qualitative information, the goal is to reduce the data. This is usually accomplished by using descriptive statistics and completing the analysis with an electronic spreadsheet such as Microsoft Office Excel or some other statistical software spreadsheet. However, care must be taken to review the data for inappropriate or erroneous responses prior to entering it into a spreadsheet. For example, a person may

have circled two ratings on a five-point rating scale and only one rating can be entered. Usually, this questionnaire is not included in the data.

Common statistical procedures include doing a frequency analysis and creating a table or graph to report the information. If the metric being used is a continuous number such as age, or a test score (compared to ordinal numbers that order opinions such as: strongly disagree, agree, strongly agree), a mean or average can be calculated. It is important to understand the difference between continuous measures and ordinal measures because each requires different statistical approaches.

Haskell Indian Nations University Alumni

Often it is good to disaggregate numerical data. For example, did males differ from females, did those who received different types of service differ in their opinions of the program, do younger people differ in their opinions compared to older participants? Cross tabulations and inferential statistical tests can provide this type of information. Again, it is important to understand what type of numerical data is being used because the statistical procedures the evaluator will use is determined by the type of data.

Working in Partnership with External Evaluators

A core principle of the AIHEC Indigenous Evaluation Framework is to broaden the role of community in the evaluation and to base the evaluation process on commonly held cultural values. However, we acknowledge that in many cases there will be a need to use the expertise of external evaluators. In fact, many funding sources require that a program work with an external evaluator who is not directly employed by the program. External evaluators have expertise to ensure that evaluation design and methods are appropriate for the interests to the program staff, community, and funders. They have the training to do data analysis and time to dedicate to preparing reports. However, external evaluators should be aware of the values central to the community's view of the role of evaluation and should be willing to work in ways that support participatory evaluation practices and elements of the AIHEC Indigenous Evaluation Framework.

Little Priest Tribal College Candling

In reframing evaluation, we encourage a strong partnering relationship between evaluators, program staff, and the community. We encourage external evaluators to facilitate a sense of partnership through respectful processes of community engagement. We also encourage evaluators to find opportunities to build capacity within the community as much as possible by including community (for example, tribal college students) in aspects of the evaluation such as gathering data or assisting with the analysis.

Reference

See Readings, "Culturally Competent Evaluation in Indian Country."

Leech Lake Tribal College Carpentry Students Working on Red Lake Home Project

Reflecting, Learning, Celebrating

As the story of the program unfolds, we must allow ourselves time to reflect on information we are gathering and analyzing, and celebrate what we have learned. Often the only evaluation report is the one written for the funding agency. It is important to meet the reporting requirements of those providing the resources for the program. However, our most important audiences are those engaged in the program and the community being served by a program.

Our reflections on what we are learning allow us to extend our knowledge and continue to move forward. The learning we have gained from our story is reason to celebrate and should be viewed as both an educational and celebratory event.

There are many ways to customize evaluation findings and report them to the community. Some ideas for reporting are:

- Highlight one or two evaluation findings in community newsletters.
- Develop a short report that is shared widely in the community.
- Host a dinner meeting and provide an oral report or presentation of key findings, or use a regularly scheduled event to make a short report.
- If the program served youth, ask them to take photos of their experience and present these at a community meeting or some other venue with an explanation of why they chose the images and what they were illustrating.
- Ask program participants to put on a short, dramatic sketch describing their experiences.
- Report key findings to the tribal council or to a council committee or tribal commission.

We can be creative and experiment with different ways to customize reports and present evaluation findings to the community. As Indigenous evaluators, our goal is to make information available and accessible, using formats that make sense for our purposes and audiences. However, we should always treat the learning from our evaluations as an event worth celebrating and attempt to engage the community in this celebration.

Haskell Indian Nations University Veterans

Grounding the Evaluation in Core Values

Before constructing the evaluation plan, we should consider grounding our work within traditional knowledge and community values. It is important to take time to identify any values important to your community that should guide your evaluation. If you decide to use the core cultural values described in this *AIHEC Indigenous Evaluation Framework*, the table on the next page is a guide for ways to address Indigenous ways of knowing and the core values when planning an evaluation. This guide was used in the example of the summer youth employment program stated earlier in this section.

Strategies for Grounding the Evaluation in Traditional Ways of Knowing and Core Values

BELIEFS AND VALUES (INDIGENOUS FRAMEWORK)
Indigenous Knowledge Creation—Context and Use are Critical • Describe how the evaluation itself will become part of the program and will be included throughout the program's implementation. • Consider how to analyze specific variables without ignoring the contextual situation. • Use evaluation approaches that ensure multiple perspectives such as mixed methods designs. • Ensure that the context of the program is fully understood by any external evaluators and is described in any evaluation reports. • Allow time for continuous reflection on what is learned and ensure that evaluation findings will be used.
People of a Place—Respect Place-based Programs • Honor the place-based nature of many of our programs. • Include information regarding how the program is situated within the community and how it connects to other programs or initiatives. • Celebrate success, however do not conclude that what works in the local situation can be transferred or generalized to other contexts without appropriate contextual adaptations.
Centrality of Community and Family—Connect Evaluation to Community • Create opportunities for engaging community through participatory evaluation practices when planning and implementing the evaluation. • Make evaluation processes transparent so key stakeholders understand its role and how it will be implemented. • Understand that programs may not focus only on individual achievement, but also on restoring community health and well being, and find ways to capture this in the program's story.
Recognizing our Gifts—Personal Sovereignty; Consider the Whole Person when Assessing Merit • Allow for creativity and self-expression. • Recognize that people enter programs at different places and with different skills and experience. • Use multiple ways to measure accomplishment of individuals and/or groups. • Honor accomplishment while recognizing that everyone has value and different gifts. • Make connections to accomplishment and responsibility to self and community.
Sovereignty—Create Ownership and Build Capacity • Follow Native Institutional Review Board processes or other tribal/community protocols for evaluation and research. • Include consent processes that allow people to see how their information is interpreted. • Use approaches and methods that will build evaluation capacity in the community and create opportunities for community members to develop evaluation skills. • Secure proper permission if future publishing is expected. • Share evaluation information in ways that celebrate your accomplishments and describe what you have learned.

Putting It Together

The AIHEC Indigenous Evaluation Framework is a demanding process that requires we commit to viewing evaluation as knowledge creation and grounding our practice in core values. It is an approach to telling our story that leads to learning. This learning should be celebrated and should contribute to the health of our communities. Some elements are easy to apply in an evaluation process, while others take time. As we implement the AIHEC Indigenous Evaluation Framework, we will also continue our learning about ways in which to move forward with this concept of Indigenous evaluation.

WINHEC Jon Henri, Chairman, with Sami University Group, Melbourne, Australia

In applying the AIHEC Indigenous Evaluation Framework, it may be helpful to review the key elements and what they suggest for evaluation practice.

Ground the Evaluation in Traditional Ways of Knowing and Cultural Values

- Commit to learn from and use evaluation knowledge.
- Understand that a program fits within a context and must be understood within that context.
- Review the traditional ways of knowing and core cultural values and consider how to incorporate their principles into the evaluation.
- Consider the values or practices of your community and identify how these will be honored in the evaluation.

Creating Our Story

- Describe the story the program plans to tell by using an inclusive process.
- Diagram or draw the major relationships in the story; describe how activities are related to desired outcomes.

Gary Tanner, Haskell Indian Nations University, with Sami University Group, Melbourne, Australia

- Identify assumptions that are being made about relationships between activities and outcomes.
- Develop key elements to explore as the story unfolds using questions or evaluative statements.

Building the Scaffolding

- Employ keen observation and interpretation of individual and communal experiences through the use of multiple approaches to explore the story; both qualitative and quantitative methods.
- Consider ways to assess changes that the program wants to influence.

Responsive Information Gathering

- Identify the different methods that will be used to gather information.
- Consider issues of cultural and community appropriateness for each method used to gather information.
- Look for and use approaches that fit within an Indigenous value system such as authentic assessment and appreciative inquiry.

Planning, Interpreting and Celebrating

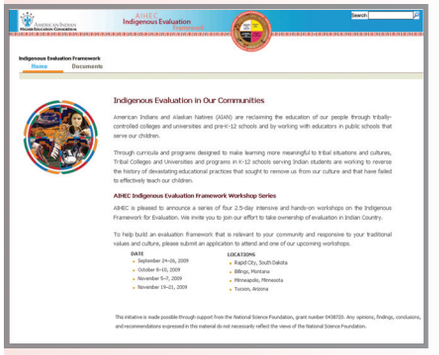
- Identify the sources of information and the schedule for collecting data.
- Construct a blueprint in the form of a table or set of tables to guide the implementation of the evaluation.
- Interpret information using appropriate analysis techniques for qualitative and quantitative data.
- Organize evaluation findings to meet the needs of multiple audiences.
- Celebrate with the community the learning from the story that is finally told.
- Use the knowledge created through the evaluation to move forward and improve services.

Continuing the Dialogue

The AIHEC Indigenous Evaluation Framework presents initial thoughts regarding the core elements within Native epistemology and tribal values that form a framework from which to conduct evaluation. We have suggested strategies for using this AIHEC Indigenous Evaluation Framework to reframe the basic elements of Western evaluation practice to be more responsive and respectful of our values. True ownership of evaluation will occur within tribal communities only after those community institutions and/or agencies (such as TCUs and K–12 schools) apply these ideas to their educational programs, particularly STEM education, and mold them to fit their settings and circumstances. As we apply these ideas, we will continue to expand our understanding of the concept of Indigenous evaluation.

AIHEC will continue this dialogue through an open access Web-based Indigenous Evaluation Resource Center located on the AIHEC Web site: http://www.aihec.org. This online resource will include additional readings and resources; lists of people who do evaluation and who are responsive to the ideas in the *AIHEC Indigenous Evaluation Framework*; and space for those who have applied ideas and experimented with different approaches to evaluation in their communities to post comments, suggestions, and share stories. All of the participants in the workshops will have access to the online resource center.

We encourage those who want to integrate ideas and practices outlined within this curriculum to continually expand the knowledge and practice of an Indigenous framing of evaluation. It is only through our experiences in learning from each other as a community of Indigenous evaluators that we will reclaim our Indigenous ways of knowing and our traditional ways of assessing merit.



Indigenous Evaluation Resource Center Web Page Example

Reference

Indigenous Evaluation Resource Center: http://www.aihec.org/IndigenousEvaluation

FRAMEWORK

Planning, Implementing and Celebrating

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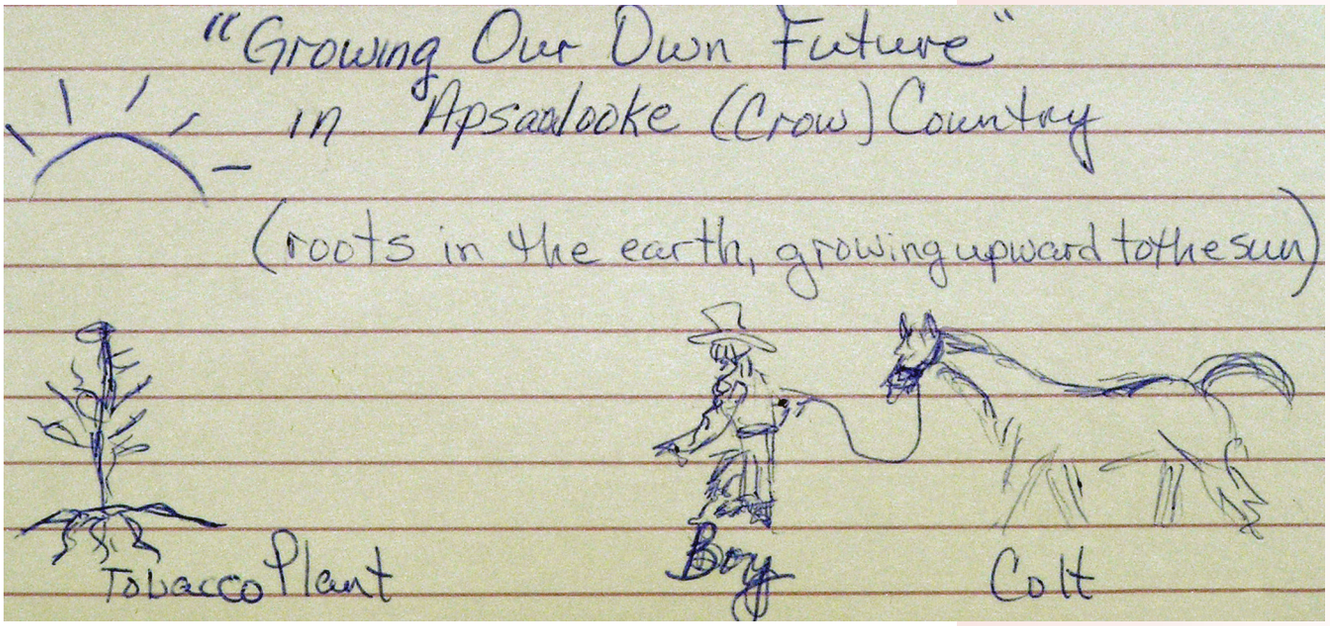
EXERCISE A

Creating a Metaphor

Choose a program that you are involved with now or in the past. Create a simple metaphor that represents a way of thinking about the program or a way of picturing and explaining the program.

In one of our workshops, a participant began to work on illustrations to show the relationship of a youth horsemanship program to the symbols developing roots and encouraging growth. The picture below is an example of one of the products from this exercise.



When you have completed the metaphor, take a few minutes to share it with someone else in the workshop—someone who you do not know.

EXERCISE B

Identifying Common Cultural Values

Join a small group to discuss the following question:

> We often refer to Cultural Values when designing programs for our communities. What does this mean in your community? What are these values?

After your group has discussed and listed values, address this question:

> How could or should these values influence our approach to evaluating our programs?

Choose a group recorder and reporter and write the values and their implications for evaluation on flip charts. The reporter will be sharing your discussion with the entire group.

EXERCISE B Worksheet

EXERCISE C

Creating the Plan to Tell Your Story

In these group exercises, you will work through a number of steps to develop an evaluation plan for a program. Your group may use a specific program your group has chosen or use Scenario One or Scenario Two. Throughout the various steps in this exercise, you need to have a recorder and a member who will report your work on each step back to the entire group. Time limitations may allow selection of only certain groups to report for each step of the exercise, but all groups should be prepared to report.

Group exercise—Step 1

- Identify the major activities in the program. What will people be doing?
- Then discuss how these activities relate to each other; what happens as a result of the activity or set of activities.
- List the outcomes that should result from the activities; put the outcomes into categories of short term, intermediate and long term outcomes.
- Discuss the relationship between activities and outcomes in the program. If you have time, diagram or draw these connections.

Group exercise—Step 2

- List some assumptions you are making about this program—who will participate or why the activities should lead to the desired outcomes.

Group exercise—Step 3

- Develop a list of major evaluation questions (or statements) that reflect what you believe are the important components of the story you want to tell in this program. The questions that should

be answered to understand who is being served, how well they are being served, and whether desired short and/or long term outcomes are achieved.

Group exercise—Step 4

- Use the Worksheet for an Indigenous Evaluation.
  - List questions/statements;
  - Then, describe the methods you will use to collect data (interviews, tests scores, observations, etc.). Note if you will attempt to design any comparisons such as comparing one cohort of students to another or comparing baseline data with data gathered later in the program.
  - List sources of information for each method and timing for gathering the information (for example, testing of students may be done twice, a pre-test at the beginning of the program and a post-test at the end, or a survey to gauge satisfaction with the program may be administered to participants once each year.
  - Note any cultural considerations that you should consider to ensure that the evaluation methods are responsive to your community and culture.

Group exercise—Step 5

- Review the values and discuss and plan for ways to incorporate them in the evaluation.
  - Review (Alaska GK-12 model, and Examples for Connecting Values to Evaluation Planning).
- Use the Worksheet for Connecting Values to Evaluation.
  - Write your ideas for addressing values.
  - Report back to the group.

Reference

See Resources, "University of Alaska GK-12 Evaluation Process and Draft Plan."

EXERCISE C—Step 4 Worksheet

Evaluation Questions/Statements	Methods that will be used to gather information (interviews, observation, tests, etc.). Note if any of these methods will involve comparing the data to some baseline, or through pre/post measures, or by comparing groups.	Who will provide the information, and when will the information be collected?	Cultural considerations: what is needed to ensure that the plan for gathering information is responsive to the culture and situation of the community?

EXERCISE C—Step 5 Worksheet

Beliefs and Values	Plan for Connecting Values
Indigenous Knowledge Creation: Context is Critical • Evaluation itself becomes part of the context, it is not an "external" function. • Evaluation must situate the program by describing its relationship to the community, including its history, current situation, and the individuals affected. • Evaluators need to attend to the relationships between the program and community. • Care must be taken if specific variables are to be analyzed without ignoring the contextual situation.	
People of a Place: Respect Place-based Programs • Honor the place-based nature of many of our programs. • Respect that what occurs in one place may not be easily transferred to other situations or places.	
Centrality of Community and Family: Connect Evaluation to Community • Engage community when planning and implementing an evaluation. • Use participatory practices that engage stakeholders. • Make evaluation processes transparent. • Understand that programs may not focus only on individual achievement, but also on restoring community health and wellbeing.	

Beliefs and Values	Plan for Connecting Values
Recognizing our Gifts—Personal Sovereignty: Consider the Whole Person when Assessing Merit • Allow for creativity and self-expression. • Use multiple ways to measure accomplishment. • Make connections to accomplishment and responsibility.	
Sovereignty: Create Ownership and Build Capacity • Follow Native Institutional Review Board processes. • Build capacity in the community. • Secure proper permission if future publishing is expected. • Report in ways meaningful to Native audiences as well as to funders.	
Other Values for this Community	

EXERCISE C—Step 5 Worksheet

Beliefs and Values	Plan for Connecting Values
Indigenous Knowledge Creation: Context is Critical	
People of a Place: Respect Place-based Programs	
Centrality of Community and Family: Connect Evaluation to Community	

Beliefs and Values	Plan for Connecting Values
Recognizing our Gifts—Personal Sovereignty: Consider the Whole Person when Assessing Merit	
Sovereignty: Create Ownership and Build Capacity	
Other Values for this Community	

SCENARIO ONE

New Environmental Science Resource Program

A tribal college has received a grant from the National Science Foundation (NSF) to create a new program in natural resource management. The grant is for three years, as follows:

Year One: Planning and recruitment.
Year Two: Implementing Year 1 of the two-year program.
Year Three: Implementing Year 2 of the two-year program, with participants graduating and transferring to four-year institutions or gaining employment in tribal natural resource management.

The grant has described the following characteristics for the program:

- The courses of study for the program will be multi-disciplinary, combining biology and chemistry, language arts, policy, and history into teaching blocks.
- Students will enroll in the program as a cohort and take the resource management courses in a block of time—four hours (for four days), rather than the usual one hour course.

Northwest Indian College Students, Padilla Bay Reserve, WA

- Frequent field research will be worked into the courses to allow for applied learning.
- A multi-disciplinary group of instructors will work with a team in planning and teaching the courses (biology instructor, chemistry instructor, Indian studies instructor, and environmental policy instructor).
- Other instructors from the college will be invited to teach modules that facilitate meeting credit requirements and integrate into the courses taught in the block schedule.
- When students are not in the multi-disciplinary course, a block of four hours every afternoon, they will enroll in other courses required for the AAS degree.

SCENARIO TWO

Two-Plus-Two Partnership

A state land grant university has just received a foundation grant to partner with two tribal colleges in the state to initiate a two-plus-two bridge program to allow students from the tribal colleges to take summer courses at the state university as a method of recruiting more American Indian students to complete four-year degrees. The two tribal colleges are currently providing courses leading to associates degrees—one tribal college is a reservation-based technical vocational school with programs in computer science, optical science, dental technician, veterinary science and other similar programs; the other tribal college is inter-tribal, urban-based and focused primarily on the arts, e.g., painting, sculpture, creative writing, performance arts, and a newly implemented program in graphic design with a strong computer science component.

Salish Kootenai College Chemistry Lab

The grant is for three years with the first year dedicated to recruiting tribal college students to attend the summer programs offered by the state university and to plan for course alignment among the two-year colleges and the state university. It is hoped that a cohort of ten graduates from the tribal colleges will have started their junior year at the state university in each of the second and third years of the grant. The bridge program was initiated by the state university because, in the past, it had very few American Indian students, which program administrators largely attributed to its great distance from most reservations in the state.

The following are characteristics of the bridge program:

- Indian students will be paired with a mentor professor from the state university; they will jointly design a summer research project for the student which the student will undertake with guidance and oversight from his or her mentor.

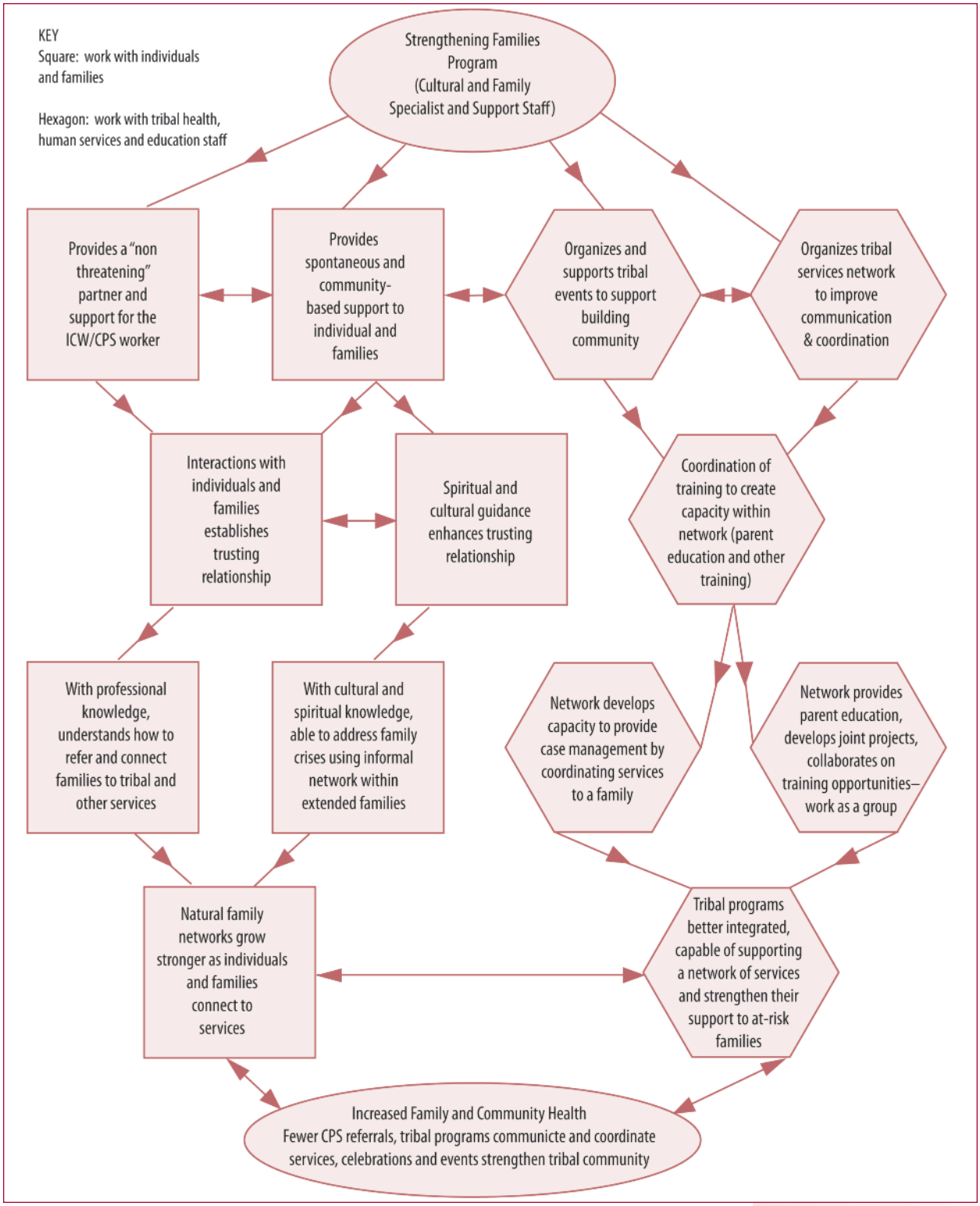
- The mentoring partnership will be based on Indian students' expressed career interests, but, as much as possible, will try to focus on developing a multidisciplinary research project for each student.
- The bridge program summer institute will provide a counselor to work with each cohort of students to ensure that each student is making progress. Tutorial assistance will be provided, if necessary, by university students. The university hopes to recruit Indian students currently at the institution as tutors.
- The summer institute will also focus on enhancing writing skills of students through a weekly creative writing seminar, which will be taught by university professors and will feature three American Indian authors who will conduct one-day lectures/workshops once a month as motivational speakers.
- Students' travel and fees (tuition, dorm costs, books) will be covered by the program.
- During each summer, travel will be paid for students' parents to attend a Parents' Weekend event at which students will share the results of their research work.
- The Indian student will have the opportunity to continue to communicate with their mentors when they have returned to their tribal colleges.

Resources

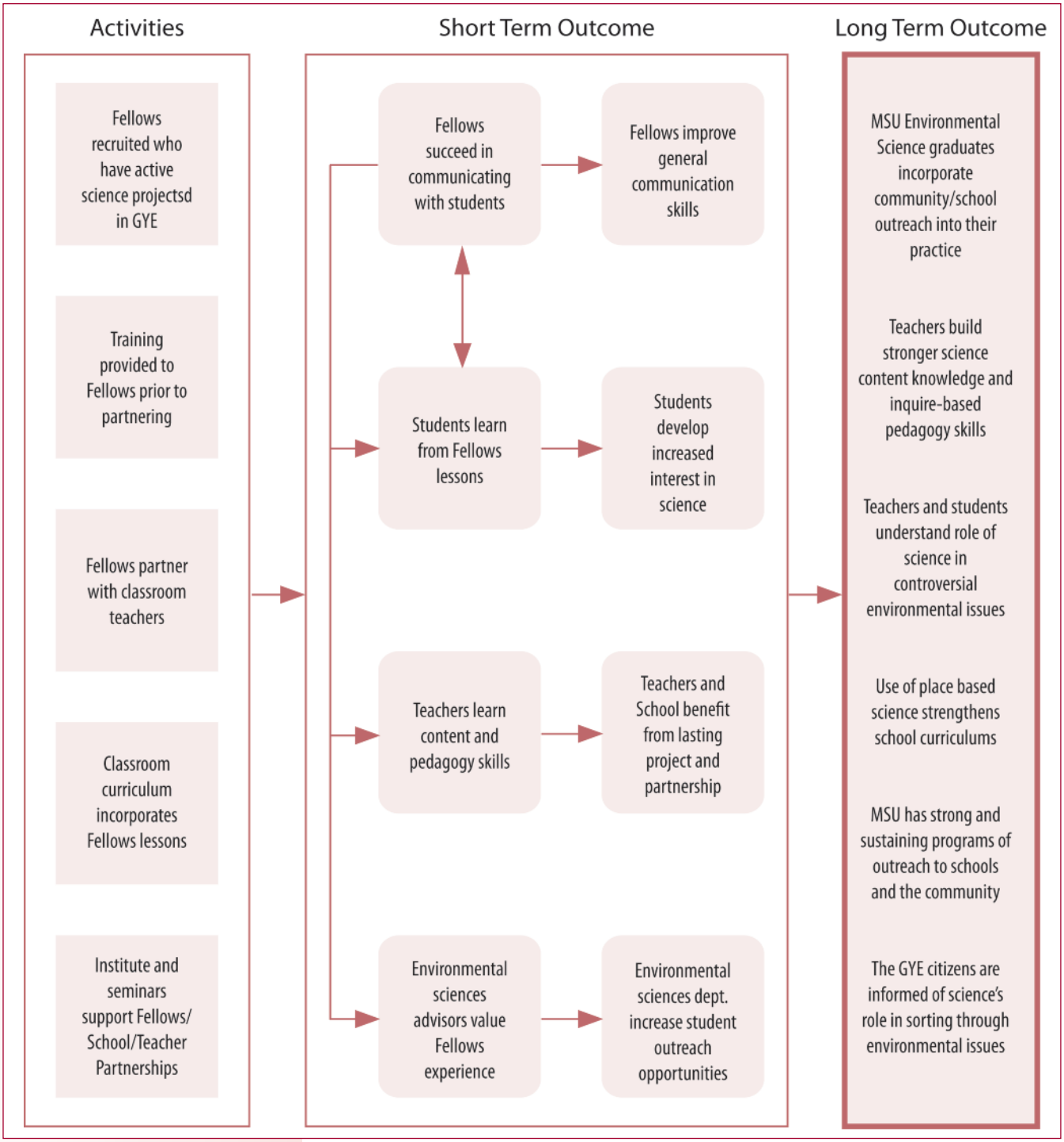
Many of the resources in this section have been mentioned in the *Indigenous Evaluation Framework* chapters. Others were not specifically mentioned within the text, but are useful when considering responsive and responsible evaluation.

A I H E C

Trail to the Tribes Theory of Change

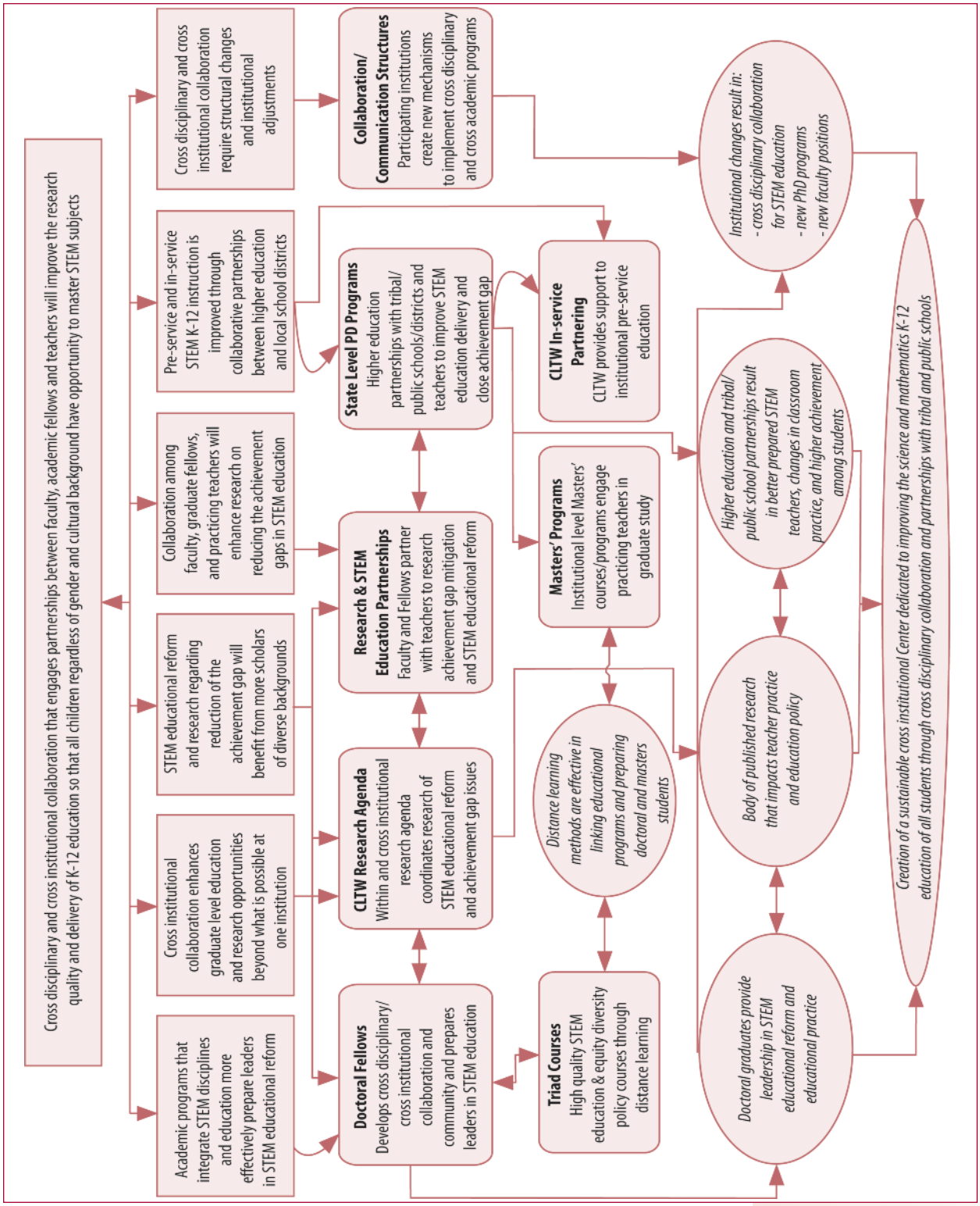


GK-12 Conceptual Map of Program

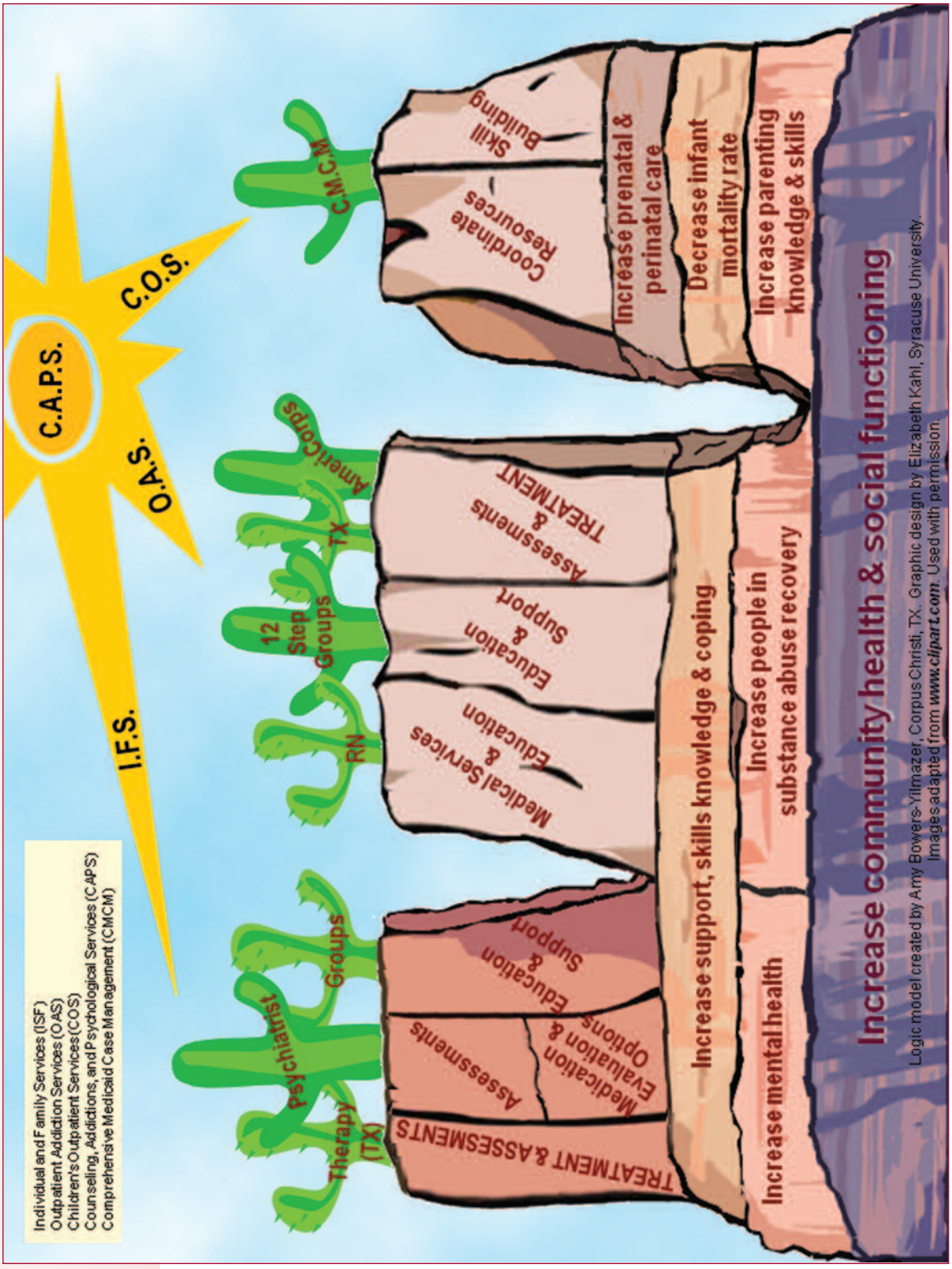


Greater Yellowstone Environment (GYE)—Program to help graduate students involved in educational science.

Center for Teaching and Learning Concept Model



Community Health and Social Functioning



Educational Accountability

AMERICAN EVALUATION ASSOCIATION

Public Statement
Educational Accountability

American Evaluation Association
Approved November 1, 2006

The American Evaluation Association (AEA) supports educational accountability systems that are methodologically sound and produce credible, comprehensive, context-sensitive information. Such systems can strengthen teaching, learning, and educational governance. With this statement, AEA hopes to contribute to the continuing public debate and evolution of educational accountability systems and, in concert with our *Guiding Principles for Evaluators* and our earlier statement on high stakes-testing in education, to affirm and extend AEA's tradition of encouraging high-quality evaluation.

Good evaluation has much in common with good accountability systems, including responsibility for assuring the highest quality data and their most appropriate use. Accountability systems are mechanisms by which (1) responsibilities and those responsible are identified, (2) evidence is collected and evaluated and, (3) based on the evidence, appropriate remedies, assistance, rewards, and sanctions are applied by those in authority. The relevance, accuracy, and completeness of the evidence are central to appropriate decision-making about policies, institutions, programs, and personnel and to the appropriateness of rewards and sanctions.

The research literature[1] identifies several important concerns that may arise with educational accountability systems, including:

- over-reliance on standardized test scores that are not necessarily accurate measures of student learning, especially for very young and for historically underserved students, and that do not capture complex educational processes or achievements;
- definitions of success that require test score increases that are higher or faster than historical evidence suggests is possible; and
- a one-size-fits-all approach that may be insensitive to local contextual variables or to local educational efforts.

The consequences of an accountability system that is not accurately or completely measuring student learning can be significant. An over-emphasis on standardized tests may lead to a decrease in the scope or depth of educational experiences for students, if the tests do not accurately measure the learning of some. In addition, if resource allocations are based on difficult-to-attain standards of success, an entire educational system may suffer. Consider in particular those schools that are struggling to serve students who face the greatest obstacles to learning. These schools may be at risk for having resources unfairly underestimated or disproportionately withheld.

AEA is dedicated to improving evaluation practice and increasing the appropriate use of evaluation data.[1] To encourage the highest quality accountability systems, we advocate approaches that feature rigor and appropriate methodological and procedural safeguards. AEA encourages movement in the following directions for educational accountability systems.

http://www.eval.org/edac.statement.asp

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- ***Multiple measures***: Empirical evidence from multiple measures, data sources, and data types is essential to valid judgments of progress and to appropriate consequences. For example, at the local level, if teachers' assessments as well as standardized test scores were incorporated into accountability systems, this could provide more detailed information regarding curriculum mastery by students.

- ***Measurement of individual student progress over time:*** Many traditional assessments examine current achievement levels only. Including longitudinal data on student progress over time would increase the sensitivity of the system to changes in learning made by individual students and could help identify the effects of services provided.

- ***Context sensitive reporting:*** Reporting systems that promote awareness of the many influences affecting outcomes are part of a complete and accurate assessment of school quality and student achievement. Findings from research and evaluations should be reported and considered part of a comprehensive educational accountability system.

- ***Data-based resource allocations:*** If resource allocations take into consideration the needs and difficulties that are identified from comprehensive data of many types, the result could be greater equity in funding and increased support for teachers and schools that serve low-income and other high-risk students.

- ***Accessible appeals processes:*** The opportunity to appeal decisions enhances the fairness and transparency of an educational accountability system that is itself accountable for the appropriateness of its decisions and the accuracy, completeness, and relevance of its evidence.

- ***Public participation and access:*** Ideally, accountability systems should be developed and implemented with broad participation by many stakeholders. A system that is open to public involvement and scrutiny is likely to result in a more complete understanding of educational institutions, their contexts, the nature and success of their efforts, and the effects and appropriateness of the consequences of accountability systems.

Educational accountability has the potential to improve the quality of our schools and the experiences and achievements of our children. The concerns and strategies outlined above are intended to encourage educational accountability systems that fulfill that potential.

Development of this statement

A task force composed of David Bernstein, Linda Mabry (chair), Howard Mzumara, Katherine Ryan, and Maria Whitsett was authorized by the AEA Board of Directors to prepare a public statement for issuance by the organization on the subject of educational accountability. Plans, progress, and a draft were presented to AEA members at three town hall sessions during the 2003-2005 association conferences. Additional internal review of drafts was provided by ten AEA members. External review was also provided by a state commissioner of education, a prominent measurement author and technical advisor to many states, a former president of the National Council for Measurement in Education and American Educational Research Association, and the president of a regional education board. The resulting statement was submitted to the AEA Public Affairs Committee, revised based on their feedback, edited or reviewed by two former AEA journal editors and two presidents, and resubmitted. Preliminary Board approval was obtained June 24, 2006, after which the statement was released for online review and comment by the full AEA membership, revised again, and approved by the Board November 1, 2006.

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Scientifically Based Evaluation Methods

AMERICAN EVALUATION ASSOCIATION

Public Statement
Scientifically Based Evaluation Methods

American Evaluation Association
Approved January 26, 2003

American Evaluation Association Response to U. S. Department of Education
Notice of proposed priority, *Federal Register* RIN 1890-ZA00, November 4, 2003, "Scientifically Based Evaluation Methods"

The American Evaluation Association applauds the effort to promote high quality in the U.S. Secretary of Education's proposed priority for evaluating educational programs using scientifically based methods. We, too, have worked to encourage competent practice through our *Guiding Principles for Evaluators* (1994), *Standards for Program Evaluation* (1994), professional training, and annual conferences. However, we believe the proposed priority manifests fundamental misunderstandings about (1) the types of studies capable of determining causality, (2) the methods capable of achieving scientific rigor, and (3) the types of studies that support policy and program decisions. We would like to help avoid the political, ethical, and financial disaster that could well attend implementation of the proposed priority.

(1) Studies capable of determining causality. Randomized control group trials (RCTs) are not the only studies capable of generating understandings of causality. In medicine, causality has been conclusively shown in some instances without RCTs, for example, in linking smoking to lung cancer and infested rats to bubonic plague. The secretary's proposal would elevate experimental over quasi-experimental, observational, single-subject, and other designs which are sometimes more feasible and equally valid.

RCTs are not always best for determining causality and can be misleading. RCTs examine a limited number of isolated factors that are neither limited nor isolated in natural settings. The complex nature of causality and the multitude of actual influences on outcomes render RCTs less capable of discovering causality than designs sensitive to local culture and conditions and open to unanticipated causal factors.

RCTs should sometimes be ruled out for reasons of ethics. For example, assigning experimental subjects to educationally inferior or medically unproven treatments, or denying control group subjects access to important instructional opportunities or critical medical intervention, is not ethically acceptable even when RCT results might be enlightening. Such studies would not be approved by Institutional Review Boards overseeing the protection of human subjects in accordance with federal statute.

In some cases, data sources are insufficient for RCTs. Pilot, experimental, and exploratory education, health, and social programs are often small enough in scale to preclude use of RCTs as an evaluation methodology, however important it may be to examine causality prior to wider implementation.

(2) Methods capable of demonstrating scientific rigor. For at least a decade, evaluators publicly debated whether newer inquiry methods were sufficiently rigorous. This issue was settled long ago. Actual practice and many published examples demonstrate that alternative and mixed methods are rigorous and scientific. To discourage a repertoire of methods would force evaluators backward. We strongly disagree that the methodological "benefits of the proposed priority justify the costs."

(3) Studies capable of supporting appropriate policy and program decisions. We also strongly disagree that "this regulatory action does not unduly interfere with State, local, and tribal governments in the exercise of their governmental functions." As provision and support of programs are governmental functions so, too, is determining program effectiveness. Sound policy decisions benefit from data illustrating not only causality but also conditionality. Fettering evaluators with unnecessary and unreasonable constraints would deny information needed by policy-makers.

> While we agree with the intent of ensuring that federally sponsored programs be "evaluated using scientifically based research . . . to determine the effectiveness of a project intervention," we do not agree that "evaluation methods using an experimental design are best for determining project effectiveness." We believe that the constraints in the proposed priority would deny use of other needed, proven, and scientifically credible evaluation methods, resulting in fruitless expenditures on some large contracts while leaving other public programs unevaluated entirely.

http://www.eval.org/doestatement.htm

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NAEP, PISA, & TIMSS: A Brief Comparison

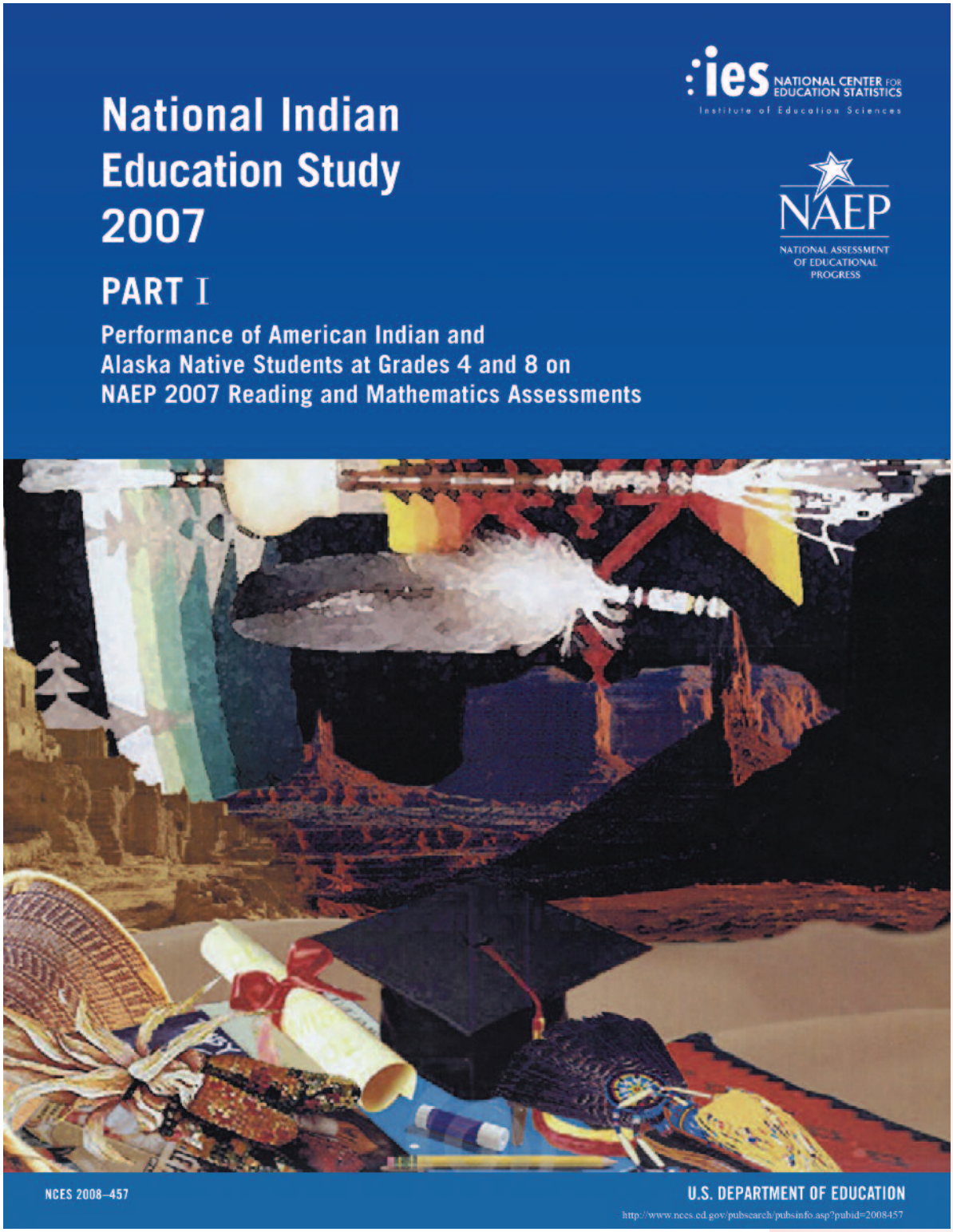
Prepared by Robert Kansky, Professor at the Science and Mathematics Teaching Center at the University of Wyoming.

NAEP: National Assessment of Educational Progress	
Main Question Addressed	What do U.S. students know and what are they able to do in each of the subjects tested?
Units of Comparison	States
Year Begun	1969 (first testing of science); 1973 (first testing of mathematics)
Countries Participating	United States
Content Area(s)	The national version of NAEP gathers data in the areas of reading, writing, mathematics, science, U.S. history, geography, the arts, and foreign languages.
Grade/age of Test Takers	Grade 4 (9-year olds); Grade 8 (13-year olds); Grade 12 (17-year olds)
Testing Cycle	Mathematics and science are tested at all three grade/age levels every four years. The most recent testing occurred in 2004.
Comments	1. The content of NAEP is determined by the U. S. Department of Education. Items are designed to sample what is sometimes called the U. S. "intended curricula." 2. NAEP results are a measure of what students have learned of the "intended curricula." Hence, it is sometimes said to measure the "attained curricula." NAEP survey data collected from students and teachers also provides a measure of what actually is taught and how it is taught (sometimes called the "implemented curricula" or "delivered curricula"). 3. NAEP has three forms: • **Trend NAEP** consists of test items that have been used repeatedly over the last 30 years. Currently, trend items in mathematics and science are administered every two years to national samples at all three grade/age levels. • **Main NAEP** consists of items that reflect current thinking about what a student can/should know and be able to do in a content area. It is administered to national samples. Each content area has its own cycle of administration; for mathematics and science, the cycle is every four years. • **State NAEP** once was voluntary, but now is required of all states (in mathematics and reading) at Grades 4 and 8 in order to remain eligible for certain federal funds. It still is voluntary at Grade 12, although there is an effort to get all states to participate. State NAEP is limited to four content areas (mathematics, science, reading, writing); mathematics and science are tested every four years.
Oversight Organization	National Assessment Governing Board
Web Site	http://nces.ed.gov/nationsreportcard

PISA: Program for International Student Achievement	
Main Question Addressed	What can students do with the mathematics and science they have learned?
Units of Comparison	Countries
Year Begun	2000
Countries Participating	Country participation varies from administration to administration. In 2003, the United States and 40 other countries participated.
Content Area(s)	Mathematics and science
Grade/age of Test Takers	Grade 10 (15-year olds)
Testing Cycle	Every three years; both areas were tested at each administration, but only one of the two emphasized. In 2003, mathematics was emphasized.
Comments	1. PISA measures a students ability to apply learning to real-world situations and to communicate solutions to others. 2. PISA tests mathematical literacy, scientific literacy, and problem solving. It defines the three terms as follows. • **Mathematical literacy** is an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments, and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned, and reflective citizen. • **Scientific literacy** is having the capacity to use scientific knowledge, to identify questions and draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity. • **Problem solving** is an individual's capacity to use cognitive processes to confront and resolve real, cross-disciplinary situations where the solution is not immediately obvious and where the literacy domains or curricular areas are not isolated within the single domain of mathematics, science, or reading.
Oversight Organization	Organization for Economic Co-operation and Development (OECD)
Web Site	http://www.pisa.oecd.org

TIMSS: Trends in International Mathematics and Science	
Main Question Addressed	Based on the country's school curricula in mathematics and science, what knowledge and skills have students acquired by Grade 4 and Grade 8?
Units of Comparison	Countries
Year Begun	1995
Countries Participating	Country participation varies from administration to administration. In 2003, 25 countries participated at Grade 4, and 41 countries participated at Grade 8.
Content Area(s)	Mathematics and science
Grade/age of Test Takers	Grade 4 (9-year olds); Grade 8 (13-year olds)
Testing Cycle	Testing in both mathematics and science is done every four years; there is a variation in the grade/age levels tested. The most recent testing was in 2003.
Comments	1. TIMSS measured what students have learned from each country's implemented curricula in mathematics and science. 2. TIMSS survey and video data also measure what is actually taught in different countries and how that "what" is taught in a sample of countries. 3. The 1995 testing also sampled students from "the final year of secondary school." There has been no testing at that grade level since 1995, and it is not part of the 2007 study now being planned. 4. The IEA also oversees PIRLS (Progress in International Reading Literacy Study). PIRLS, initiated in 2006, is administered every five years to students at Grade 4.
Oversight Organization	International Association for Evaluation of Educational Achievement (IEA)
Web Site	http://www.timss.org

National Indian Education Study 2007



CONTENTS

Student Artwork on the cover:
Untitled by Samuel Dalgai;
tribal affiliation: Navajo

The National Indian Education Study (NIES) is a two-part study designed to describe the condition of education for American Indian and Alaska Native students in the United States. The study is sponsored by the Office of Indian Education and conducted by the National Center for Education Statistics of the U.S. Department of Education. NIES is authorized under Executive Order 13336, *American Indian and Alaska Native Education*, which was enacted in 2004 to improve education efforts for American Indian and Alaska Native students nationwide. (See http://www.whitehouse.gov/news/releases/2004/04/20040430-10.html for details.)

Part I of the NIES is conducted through the National Assessment of Educational Progress (NAEP) and provides in-depth information on the academic performance of fourth- and eighth-grade American Indian and Alaska Native students in reading and mathematics. NAEP is a congressionally mandated project of the U.S. Department of Education. By reporting student achievement data at the national, state, and local levels, NAEP plays an integral role in evaluating what our children know and can do in various subjects. NAEP is carried out by the Commissioner of the National Center for Education Statistics (within the Institute of Education Sciences). The National Assessment Governing Board oversees and sets policy for NAEP.

Part II of the NIES is a survey that describes the educational experiences of the fourth- and eighth-grade American Indian and Alaska Native students who participated in the NAEP assessments. The survey focuses on the integration of native language and culture into school and classroom activities.

Conducted in 2005 and 2007, NIES provides data on nationally representative samples of American Indian and Alaska Native students from public, private, Department of Defense, and Bureau of Indian Education funded schools. It is a reliable source of data on American Indian and Alaska Native students, especially for educators, administrators, and policymakers who address the educational needs of students. NIES is advised by a technical review panel; members of this panel include educators and researchers selected for their expertise in American Indian and Alaska Native education.

Executive Summary

The 2007 National Indian Education Study (NIES) was conducted by the National Center for Education Statistics on behalf of the U.S. Department of Education, Office of Indian Education. This report presents the results for Part I of the study focusing on the performance of American Indian and Alaska Native (AI/AN) fourth- and eighth-graders on the 2007 National Assessment of Educational Progress in reading and mathematics.

A national sample of approximately 10,100 AI/AN students at grades 4 and 8 participated in the 2007 reading assessment and 10,300 in the mathematics assessment. Results from this study are compared to those from the first NIES conducted in 2005. The results for 11 states with relatively large populations of AI/AN students are presented in addition to the national results.

READING RESULTS

Overall, the average reading scores for AI/AN fourth- and eighth-graders showed no significant change since 2005 and were lower than the scores for non-AI/AN students in 2007.

In 2007 at both grades, AI/AN students attending schools in which less than 25 percent of the students were AI/AN scored higher than their peers attending schools with higher concentrations of AI/AN students, and those attending public schools scored higher than their peers in Bureau of Indian Education schools.

Patterns in reading results vary when AI/AN students are compared to other racial/ethnic groups

While the overall average reading scores for AI/AN students were lower than the scores for non-AI/AN students at both grades in 2007, they were not consistently lower than the scores for all racial/ethnic groups.

- Average scores for AI/AN students were not significantly different from the scores for Black or Hispanic students but were lower than the scores for White and Asian/Pacific Islander students.
- Scores for higher-performing AI/AN students—those at the 75th and 90th percentiles—were higher than those of their Black peers.
- AI/AN fourth-graders attending city schools scored higher than their Black and Hispanic peers, and AI/AN eighth-graders attending rural schools scored lower than their Hispanic peers.

AI/AN students in some states score higher in reading than their peers in the nation

When compared to the scores for all AI/AN students in the nation, average reading scores for AI/AN fourth-graders in Oklahoma and eighth-graders in Oklahoma and Oregon were higher in 2007. Scores for AI/AN fourth- and eighth-graders in Alaska, Arizona, New Mexico, and South Dakota were lower than the average scores of all AI/AN students nationwide.

MATHEMATICS RESULTS

Overall, the average mathematics scores for AI/AN fourth- and eighth-graders showed no significant change since 2005 and were lower than the scores for non-AI/AN students in 2007. There was, however, an increase in the percentage of AI/AN fourth-graders performing at or above the *Proficient* level from 21 percent in 2005 to 25 percent in 2007.

In 2007 at both grades, AI/AN students attending schools in which less than 25 percent of the students were AI/AN scored higher than their peers attending schools with higher concentrations of AI/AN students, and those attending public schools scored higher than their peers in Bureau of Indian Education schools.

Patterns in mathematics results vary when AI/AN students are compared to other racial/ethnic groups

While the overall average mathematics scores for AI/AN students were lower than the scores for non-AI/AN students at both grades in 2007, they were not consistently lower than the scores for all racial/ethnic groups.

- AI/AN students at both grades scored higher on average than Black students, scored lower than White and Asian/Pacific Islander students, and had average scores that were not significantly different from Hispanic students.
- Scores for higher-performing AI/AN students—those at the 75th and 90th percentiles—were higher than scores for their Black peers.

Introduction

The National Indian Education Study (NIES) was conducted by the National Center for Education Statistics on behalf of the U.S. Department of Education, Office of Indian Education. NIES is the only nationally representative assessment of American Indian/Alaska Native (AI/AN) students. It lays the foundation for gathering useful trend data for this student population.

The NIES Project

This report, Part I of the study, focuses on the performance results of fourth- and eighth-grade AI/AN students on the 2007 National Assessment of Educational Progress (NAEP) in reading and mathematics. The first NIES study was conducted in 2005, and the results for 2007 are compared to results from that assessment in this report.

Presidential Executive Order 13336 called for a closer examination of the educational experiences and progress of AI/AN students, as well as the promotion of research opportunities and collaboration with tribal communities. The data presented in this report and the forthcoming Part II report provide additional information that will help inform policymakers, researchers, and educators.

NIES Part II will present the results gathered from questionnaires completed by AI/AN students, the teachers who teach them, and the administrators of schools that serve them, and will provide a snapshot of the cultural and educational experiences of AI/AN fourth- and eighth-graders.

Sample Design

The NIES sample was designed as an augmentation of the 2007 NAEP reading and mathematics assessment samples of AI/AN students in the fourth and eighth grades. Race/ethnicity information from official school records was used to identify AI/AN students during sampling. In 2007, about 10,100 AI/AN students participated in the reading assessment, and about 10,300 AI/AN students participated in the mathematics assessment (table 1). The national results reflect the performance of students enrolled in public, Bureau of Indian Education (BIE), Department of Defense, and private schools. The percentage of sampled AI/AN students enrolled in schools other than public and BIE schools nationally was approximately 5 percent.

Table 1. Number of participating schools with AI/AN students and number of participating AI/AN students in NAEP reading and mathematics at grades 4 and 8: 2007

	Reading		Mathematics	
Grade	Schools	Students	Schools	Students
Grade 4	1,470	5,300	1,450	5,700
Grade 8	1,260	4,800	1,270	4,600

NOTE: AI/AN = American Indian/Alaska Native. The numbers of schools are rounded to the nearest ten. The numbers of students are rounded to the nearest hundred.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 National Indian Education Study.

Results are reported for 11 states with relatively large populations of AI/AN students. Nationally, AI/AN students comprise about 1 percent of all students, but in the 11 selected states combined, they make up almost

6 percent of the overall student population (table 2). Over 50 percent of the nation's AI/AN students reside in the 11 states for which state-level results are provided in this report, with about 42 percent residing in the other 39 states and the District of Columbia.

Table 2. Total enrollment, AI/AN enrollment, and AI/AN students as a percentage of total enrollment in public elementary and secondary schools, by selected states: 2005–06

State	Total enrollment (all students)	AI/AN enrollment	AI/AN as percent of total
Nation	49,894,627	646,287	1.3
Total for selected states	**6,394,808**	**374,960**	**5.9**
Alaska	133,288	35,393	26.6
Arizona	1,094,454	67,498	6.2
Minnesota	839,243	17,400	2.1
Montana	145,416	16,422	11.3
New Mexico	326,758	36,210	11.1
North Carolina	1,416,436	20,463	1.4
North Dakota	98,283	8,483	8.6
Oklahoma	634,739	120,122	18.9
Oregon	552,194	12,986	2.4
South Dakota	122,012	12,775	10.5
Washington	1,031,985	27,208	2.6

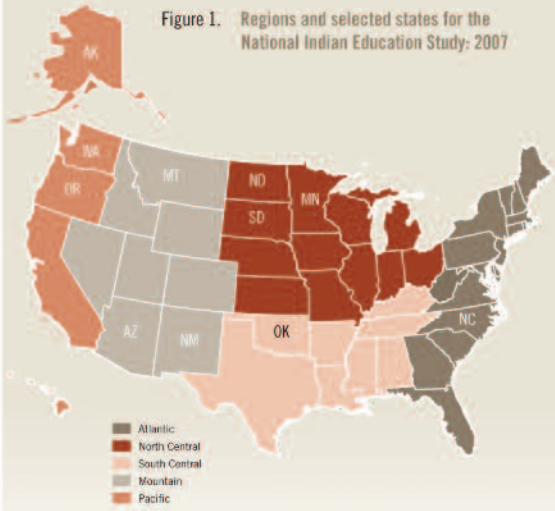
NOTE: AI/AN = American Indian/Alaska Native.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," unpublished data, 2005–06.

State-level results, drawn from public and BIE schools only, are compared to results from a national sample of AI/AN students from public and BIE schools.

High density schools were over-sampled for NIES 2007 to support the reporting of results based on "school density." (See Technical Notes for more details on the sampling design.) School density indicates the proportion of AI/AN students enrolled in a given school. Low density schools have less than 25 percent AI/AN students enrolled. High density schools have 25 percent or more AI/AN students enrolled.

Results are also reported in terms of five regions of the country: Atlantic, North Central, South Central, Mountain, and Pacific. The NIES regions are based on U.S. Census divisions and are defined to align with the distribution of the AI/AN student population. Like the national results, the regional data are based on the sample drawn from public, BIE, Department of Defense, and private schools. See figure 1 for a map of the regions.

Figure 1. Regions and selected states for the National Indian Education Study: 2007



NOTE: Selected states are identified using abbreviations. These states were identified by NAEP as having a relatively large proportion of American Indian/Alaska Native students as a percentage of the state's total population. Regions referenced in this figure were defined by NAEP exclusively for the National Indian Education Study.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 National Indian Education Study.

About This Report

This report describes the reading and mathematics performance of AI/AN fourth- and eighth-grade students by examining 2007 NAEP results for the nation, for regions, for selected states, and for groups of students defined by race/ethnicity, eligibility for free/reduced-price school lunch, gender, type of school location, type of school, and school density. Results are also compared to those from the 2005 assessments.

AI/AN student performance is compared to the performance of all other students in the nation or region. In addition, the sections discussing state results compare the performance results of AI/AN students within each state to those of AI/AN students in each of the other selected states, and to the performance of the national sample of AI/AN students.

Information is also provided about the design of the reading and mathematics assessments, including the frameworks, item maps, and sample questions. The Technical Notes discuss the technical procedures used for sampling and data collection and define the reporting variables.

Reporting NAEP Results

The students selected to take the NAEP assessment represent all fourth- and eighth-grade students across the United States. Students who participate in NAEP play an important role by demonstrating the achievement of our nation's students and representing the success of our schooling. NAEP data can only be obtained with the cooperation of schools, teachers, and students nationwide.

Understanding NAEP Results

Results in this report are presented in two ways: in terms of scale scores and as the percentage of students scoring at or above the three NAEP achievement levels. The average scale scores represent how students performed on the assessment. The achievement levels represent how that performance measured up against achievement expectations. Thus, the average scale scores represent what students know and can do, while the achievement-level results indicate the degree to which student performance meets expectations of what they should know and be able to do.

Scale Scores

NAEP average reading and mathematics scores are reported for grades 4 and 8 on separate 0–500 scales. Scale score results also are presented for students at various percentiles. An examination of scores at different percentiles on the 0–500 scale indicates whether or not average score results are reflected in the performance of lower-, middle-, and higher-performing students. Because NAEP scales are developed independently for each subject, average scores cannot be compared across subjects even when the scales have the same range.

Achievement Levels

NAEP results are reported at three achievement levels: *Basic*, *Proficient*, and *Advanced*. Achievement levels are performance standards defining what students should know and be able to do. They are set by the National Assessment Governing Board, based on recommendations from panels of educators and members of the public, to provide a context for interpreting student performance on NAEP. Achievement-level results are reported as percentages of students performing at or above *Basic*, at or above *Proficient*, and at *Advanced*.

As provided by law, the National Center for Education Statistics (NCES), upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials.

NAEP ACHIEVEMENT LEVELS

Basic denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at a given grade.

Proficient represents solid academic performance. Students reaching this level have demonstrated competency over challenging subject matter.

Advanced represents superior performance.

http://nces.ed.gov/nationsreportcard/reading/achieve.asp

http://nces.ed.gov/nationsreportcard/mathematics/achieve.asp

Item Maps

Item maps provide another way to interpret the average scores and achievement-level results for each grade. The item maps displayed in this report show concrete examples of what students at various achievement levels are likely to know and be able to do on NAEP reading and mathematics questions at different points on the 0–500 scales.

Interpreting Results

Comparisons over time or between groups are based on statistical tests that consider both the size of the differences and the standard errors of the statistics being compared. Standard errors represent the amount of uncertainty in estimates that are based on a sample instead of the entire population of interest. Estimates based on smaller groups are likely to have larger standard errors. The size of the standard errors may also be influenced by other factors such as how representative the students assessed are of the entire population.

When an estimate has a large standard error, a numerical difference that seems large may not be statistically significant. Differences of the same magnitude may or may not be statistically significant depending upon the size of the standard errors of the estimates. For example, a 2-point gain between 2005 and 2007 for non-AI/AN students may be statistically significant, while a 2-point gain for AI/AN students may not be (see figure 21 in the mathematics results section).

In the tables and figures in this report, the symbol (*) indicates that scores or percentages are significantly different from each other. A footnote beneath each table or figure explains which groups were compared.

Significance test results are not shown for all possible comparisons within each table or figure. NAEP results adopt widely accepted statistical standards; findings are reported based on a statistical significance level set at .05 with appropriate adjustments for multiple comparisons. Score differences or gaps cited in this report are calculated based on differences between unrounded numbers. Therefore, the reader may find that the score difference cited in the text may not be identical to the difference obtained from subtracting the rounded values shown in the accompanying tables or figures. The reader is cautioned that only those differences that are discussed in the text (for instance, a percentage or average score that is higher or lower than another), or that are indicated by the symbol (*) in the tables and figures, have been determined to be statistically significant using the criteria established for this report.

Cautions in Interpretation

Changes in performance results over time may reflect not only changes in students' knowledge and skills but also other factors, such as changes in student demographics, education programs and policies (including policies on accommodations and exclusions), and teacher qualifications. In addition to the overall performance of students in the nation, regions, and selected states, results are presented by different demographic characteristics (for example, gender, race/ethnicity, or eligibility for the National School Lunch Program). These results should not be used to establish a cause-and-effect relationship between demographic characteristics and achievement. Educational and socioeconomic factors may affect student performance in many complex ways.

Sample Guidelines for Engaging Elders

Listed below are a set of potential guidelines to follow when engaging elders. These are based upon suggestions from Dr. Rosemary Christensen. A professor at the University of Green Bay, Christensen guides those undergraduate students who choose to take an oral concentration involving meeting with and learning from Native elders.

Involve elders at the beginning of a project, rather than after the fact when you have already decided on methods and processes. Elders don't need to be intensely involved at the beginning, but can be informed of the project, invited to meetings and kept abreast of the project as its structure is developed.
Invite elders to suggest ways in which they would value being involved. Encourage them to let you know what they need or want to know about the project.
Be clear about how much of a time commitment you are expecting from elders (one year, six months, several weeks, or less).
Always inform elders if you plan to pay them for any activities (including attending meetings, reading or responding to survey materials). Include within your budget a nominal fee which may even be paid at intervals.
Check in regularly with elders to ensure they are aware of your project's planning and implementation. As there are many different ways to do this, determine what works best for your group of elders. You may provide information at intervals.
Always ensure elders know how to reach meeting or event destinations. Be prepared to offer transportation assistance.
Ensure meeting locations are accessible, safe and comfortable. If possible, designate a special area where elders can sit and relax.
Make sure elders are clear about dates and agreed places to meet.
Be aware of local norms/customs that need to be followed for elder comfort.
Be familiar with any gender issues that may arise. Be careful about joining into any local political issues.
Consider doing reciprocal work for elders. For example, offer to help out in the garden or perform light housework.
Occasionally check in with elders to ensure things are running smoothly; also ensure they still want to continue with the project.
When communicating with elders, remember the following: • Give everyone an opportunity to talk, even if it is to agree with others or to indicate that they don't have anything to say at this time. • Consider using an elder who is a natural facilitator to help in leading a discussion with others. • Do not tell or lecture elders on what you know, or think you know. This approach wastes the elder's valuable time. • Do not ask elders for advice on something that you are not planning to change. • An elder may need a certain amount of face-to-face discussion to be comfortable with the give and take of information provided by both parties. • Be aware of generational issues. Elders may not be able to use e-mail. Or, they may not want to receive phone calls during certain times or at certain places. Ask elders how best to contact them, or ask them who might act as a go-between.

Methods for Gathering Information

Information can be gathered in a number of ways. The National Science Foundation (NSF) has developed a table listing different methods and the advantages and disadvantages of each. The table below summarizes those major procedures.

To ensure we do not perpetuate the legacy of inappropriate information-gathering, we must continually reframe our methods so they are responsive to our communities, cultures, and traditions.

Advantages and Disadvantages of Various Data Collection Procedures*

PROCEDURE	ADVANTAGES	DISADVANTAGES
Self-administered questionnaire	Inexpensive. Can be quickly administered if distributed to a group. Well-suited for simple and short questionnaires.	No control for misunderstood questions, missing data, or untruthful responses. Not suited for exploration of complex issues.
Interviewer-administered questionnaires (by telephone)	Relatively inexpensive. Best suited for relatively short and non-sensitive topics.	Proportion of respondents without a private telephone may be high in some populations. As a rule, not suitable for children, older people, and non-English speaking persons. Not suitable for lengthy questionnaires and sensitive topics. Respondents may lack privacy.
Interviewer-administered questionnaires (in person)	Interviewer controls situation, can probe irrelevant or evasive answers; with good rapport, may obtain useful open-ended comments.	Expensive. May present logistical problems (time, place, privacy, access, safety). Often requires a lengthy data collection period unless project employs large interviewer staff.
Open-ended interviews (in person)	Usually yields richest data, most details, new insights. Best if in-depth information is wanted.	Same as above (interviewer administered questionnaires); often difficult to analyze.
Focus groups	Useful to gather ideas, different viewpoints, new insights. Good for improving question design.	Not suitable for generalizations about populations being studied.
Tests	Provide "hard" data which administrators and funding agencies often prefer: relatively easy to administer; good instruments may be available from vendors.	Available instruments may be unsuitable for treatment population; developing and validating new, project-specific tests may be expensive and time consuming. Objections may be raised because of test unfairness or bias.
Observations	If well-executed, best for obtaining data about behavior of individuals and groups.	Usually expensive. Needs well-qualified staff. Observations may affect behavior being studied.

* Adapted from the National Science Foundation, *User-Friendly Handbook for Project Evaluation: Science, Mathematics, Engineering and Technology Education*. NSF 93-152. p. 44.

Cultural Considerations for Gathering Information

The table below describes a variety of information-gathering methods and how they might be considered in order to ensure respect for cultural protocols and situations.

Gathering Information Procedure	Cultural Considerations
Self-administered questionnaires that respondents complete Useful to gauge satisfaction with a program activity or event, or to determine what people need or want from a program.	This is an efficient way to gather information, but it has the following limitations: • The terms and language should be at a level appropriate to the literacy level of respondents. • In some situations, terms may need to be translated. • Best used when participants have only a few responses to choose from (i.e. a close-ended question survey), but elders and others within a community may not like having to choose from forced answers. • Does not allow for relationship-building. Should be used only when respondernts trust and understand the program, and the need for information. • Survey items should be clearly stated so there is no misunderstanding by those completing the questionnaire.
Interviewer-administered questionnaires or open-ended questions by telephone Useful when time and distance makes in-person visits impossible.	This is another efficient way to collect information, but it, too, has its own set of limitations: • Does not allow for relationship-building. Should be used only when respondents trust and understand the program, the caller, and the need for information. • Some populations may have limited access to telephones.
Questionnaires and open-ended interviews in person Useful way to gather good information.	Visiting and talking about the program is an excellent way to gather information. Cultural considerations include: • Plan on spending time developing relationships before getting to the purpose of the interview. • Avoid direct questions if possible. Instead, find ways to stimulate a conversation about the subject of the interview. • Ensure that confidentiality is maintained. • Ensure information has been correctly interpreted; check back with respondents to ensure their quotes are accurate and any information used within a report is correct. • Offer a gift of appreciation.
Focus groups Good for getting multiple viewpoints about the program. More efficient than individual interviews.	Focus groups are useful, especially when people feel comfortable enough with each other and the subject to discuss their views and experiences. The cultural considerations for focus groups are the same as those for open-ended interviews. The Talking Circle methodology can be adapted for use in focus groups.
Tests and measurement instruments of performance or attitudes and behavior Important if the evaluation requires a measurement of learning or changes in attitudes or behaviors. These types of measurement tools need to be valid and reliable.	Often needed to show changes in some element of the program; should be used in ways that, regardless of results, ensure all those measured are treated with respect and encouraged to realize their unique gifts. Cultural considerations include: • It is important that the measure is valid and actually measures the concepts or content central to the program. This applies to all tests or measurement instruments. Since Indian programs are place-based and community specific, it may be necessary to create measures or adapt those produced by publishers or other sources. • The measurement tool needs to be reliable—i.e., there is a consistency in responses if the test or tool is repeated again after the first administration. There are statistical measures for reliability which can be used, or you can pilot a measure using the test-retest process with a small sample of people to check for consistent responses. • When possible, authentic assessment or multiple ways of measuring also should be used. These include tests, written work, demonstrations, and artistic expressions (drawings, photographs).
Observations A good method to describe what is happening in a classroom or at an event. It can also be used to assess demonstrations of participant accomplishments.	Observers can be recruited from the community to expand participation in the evaluation. • Participants, such as students, can demonstrate their accomplishments to observers such as elders or tribal leaders. • Consider creating observation rubrics (sets of measurements) that elders or others can use to assess program events or student demonstrations. • Have observers practice using rubrics to ensure they are in agreement about observations.

University of Alaska GK-12 Evaluation Process and Draft Plan

The evaluation process is guided by core values identified in the American Indian Higher Education Consortium's (AIHEC) Indigenous Framework for evaluation. With support from NSF, AIHEC developed a framework based on Indigenous knowledge creation and core beliefs and values common in Native communities. The framework is designed to help Indigenous programs embed evaluation within Indigenous ways of knowing and values. It does not reject Western evaluation tradition, but rather guides programs to focus first on Indigenous framing and use this process to choose which Western evaluation methodologies are appropriate and which should be rejected or perhaps adapted.

Core elements of the AIHEC Indigenous Evaluation Framework and the ways in which they will be respected are illustrated in the following table.

Beliefs and Values (AIHEC Framework)	K-12 Project Evaluation Process and Practice
Indigenous Knowledge Creation—Context is Critical • Evaluation itself becomes part of the context, it is not an "external" function • Evaluation must situate the program by describing its relationship to the community, including its history, current situation, and the individuals affected • Evaluators need to address the relationships between the program and community • Evaluators must take special care to analyze specific variables and not ignore their contextual situations.	Evaluation will be embedded in the program from the beginning. The external evaluator will meet with major stakeholders to discuss evaluation planning and ways to ensure that evaluators choose and/or adapt only those Western evaluation research methods that will fit the core values of the program and the communities it serves.
People of a Place—Respect Place-based Programs • Honor the place-based nature of many of our programs • Respect that what occurs in one place may not be easily transferred to other situations or places	The evaluation will capture contextual information regarding each community and consider how this information mediates program activities and findings.
Centrality of Community and Family—Connect Evaluation to Community • Engage community when planning and implementing an evaluation • Use participatory practices that engage stakeholders • Make evaluation processes transparent • Understand that programs may not focus only on individual achievement, but also on restoring community health and well-being	The evaluation will use participatory practices. The draft evaluation prepared for this proposal will be reviewed and modified based on an inclusive process engaging major stakeholders. Efforts will be make to ensure that assessment of community-based research includes community members and local educators.
Recognizing our Gifts, Personal Sovereignty—Consider the Whole Person when Assessing Merit • Allow for creativity and self-expression • Use multiple ways to measure accomplishment • Make connections to accomplishment and responsibility	Student performance will be assessed through teacher assessments, as well as by elders. Students will be asked to make connections between their research and their responsibility to use knowledge in ways that contribute to community.
Sovereignty—Create Ownership and Build Capacity • Follow Native Institutional Review Board processes • Build capacity in the community • Secure proper permission if future publishing is expected • Report in ways that are meaningful to Native audiences as well as to funders	The evaluation will seek all appropriate approval processes, including formal IRBs and informal processes within communities.

In addition to following the guidance of the *AIHEC Indigenous Evaluation Framework*, the evaluation will be based on a theory-of-change model. During an inclusive process at the beginning of the program, major stakeholders should help identify the conceptual model or theory-of-change for the program. The relationship of activities to outcomes should be mapped in a way that is useful to project participants, and the assumptions underlying those connections between program activities and outcomes should be made explicit so they can be assessed through the evaluation process. This process is tied to Indigenous ways of thinking because it is involves creating the program evaluators hope to tell and then identifying how the evaluation—complete with the establishment of key questions, evaluation design, data collection and analysis—will capture the program's final story. Within all Indigenous communities, lessons are learned through the telling of the stories.

The table below contains a draft evaluation plan subject to review by stakeholders. It outlines evaluation processes, indicators and timeframes based on key evaluation questions.

Draft Evaluation Plan for Indigenous Knowledge Systems, Science and K-12 Fellows Program

Evaluation Questions	Data Collection/Methodology	Performance Indicator	Timeline
How do K-12 fellows experience the following program components?			
Integrating a common course of study related to broad themes of Indigenous knowledge systems and Western science with their disciplinary studies	1) Pre- and post-survey perceptions of knowledge systems and their relevance to their research and disciplinary study 2) Interviews to gather qualitative richness regarding experience 3) Documentation of publications and presentations	1) Fellows responses on pre-/post-survey will show a significant change in perceptions 2) Examples of experience that will suggest strengths to be supported and weakness to be corrected 3) At least one major publication/ presentation each year	Fall/Spring Spring Summer
Designing place-based research projects in collaboration with indigenous community experts, university scholars and middle and high school teachers that explore hypotheses related to the intersection of Western and Indigenous systems of knowing	1) Interviews to gather qualitative richness regarding experience 2) Inventory of field/observational place-based research for middle and high school student 3) Fellows write about their experiences working with community members and educators	1) Examples of experience that will suggest strengths to be supported and weakness to be corrected 2) 60% to 80% of the school projects are useful and disseminated for schools in state 3) Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring Ongoing Ongoing
Working with community members, students and teachers in organizing and presenting research at Native science fairs	1) Observation of science fairs 2) Elder assessments of fellows engagement with community 3) Interviews to gather qualitative richness regarding fellows experience 4) Fellows journals of their experiences working with community members and educators	1) All projected science fairs take place 2) 90% of elder assessments of fellows engagement is positive 3) Examples of experience that will suggest strengths to be supported and weakness to be corrected 4) Examples of experience that will suggest strengths to be supported and weakness to be corrected	Summer When most appropriate Spring Ongoing

Evaluation Questions	Data Collection/Methodology	Performance Indicator	Timeline
How do middle and high school teachers and Indigenous community experts describe their collaboration with fellows and university faculty?			
Middle and high school teachers	Interviews/focus groups (via distance technology)	Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring
Indigenous community members	Interviews/focus groups (via distance technology)	Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring
What evidence is there of benefits to middle and high school students?			
How do students demonstrate understanding of place-based science that integrates different ways of knowing and doing research?	Student demonstrations at science fair	90% of schools working with K-12 will have local science fairs, 60% will participate in statewide fair	Spring
What evidence is there that students developed an appreciation for science?	Pre- and post-survey of interest in science	60% of students will show gains on science interest survey	Early Fall and Spring
What evidence is there of research and instructional collaboration within the University of the Arctic and Native organizations that can sustain the development of STEM scholars who are able to work within co-existing systems of thought and contribute to critically important place-based research?			
Did the project meet its goal to provide courses and seminars though the U. Arctic network?	Inventory of courses offered, course evaluations	Project will meet goals established for courses and seminars, 80% of fellows will favorably rate courses as very good to excellent	Spring
How did Native organizations contribute to K-12 place-based research projects?	Survey of individuals from organizations who engaged in the K-12 program	80% of those surveyed will favorably rate their experience in the project and they will provide examples of experience that will suggest strengths to be supported and weakness to be corrected	Summer
What are the major lessons learned through the K-12 program to inform continuing development of PhDs?	1) Interviews with major stakeholders (staff and advisory committee 2) Summative assessment of all evaluation data	Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring Summer

Examples of Connecting Core Values to GK-12 Draft Evaluation Plan

Beliefs and Values (AIHEC Framework)	Ways in which Values are Addressed
Indigenous Knowledge Creation—Context is Critical • Evaluation itself becomes part of the context; it is not an "external" function • Evaluation must situate the program by describing its relationship to the community, including its history, current situation, and the individuals affected • Evaluators need to attend to the relationships between the program and community • Evaluators must take special care to analyze specific variables and not ignore their contextual situations	• The evaluation planning begins with program implementation • Ensure that the context of the program is fully understood by any external evaluators and that it is described in any evaluation reports • Create opportunity for participatory evaluation practice • Use evaluation approaches that ensure multiple perspectives
People of a Place—Respect Place-based Programs • Honor the place-based nature of many of our programs • Respect that what occurs in one place may not be easily transferred to other situations or places	• Capture contextual information regarding how the program is situated within the community and relates to other programs or initiative • Celebrate success, but do not conclude that what works in the local situation can be transferred or generalized to other contexts without appropriate adaptations
Centrality of Community and Family—Connect Evaluation to Community • Engage community when planning and implementing an evaluation • Use participatory practices that engage stakeholders • Make evaluation processes transparent • Understand that programs may not focus only on individual achievement, but also on restoring community health and well-being	• Decide the roles community members or program participants can play in supporting the evaluation in its planning and implementation phases • Make the evaluation process transparent to staff, participants, community • Look for connections with other programs or projects in the community
Recognizing our Gifts, Personal Sovereignty—Consider the Whole Person when Assessing Merit • Allow for creativity and self-expression • Use multiple ways to measure accomplishment • Make connections to accomplishment and responsibility	• Consider ways to capture individual or group achievement in multiple ways • Honor accomplishment while also valuing that everyone has value and gifts • Honor accomplishment and connect it to responsibility to self and community
Sovereignty—Create Ownership and Build Capacity • Follow Native Institutional Review Board processes • Build capacity in the community • Secure proper permission if future publishing is expected • Report in ways that are meaningful to Native audiences as well as to funders	• Follow proper protocols for evaluation and research • Include consent processes that allow people to see how their information is interpreted • Include opportunities for community members to develop evaluation skills • Celebrate learning by sharing the lessons learned through the evaluation

Indigenous Evaluation: Respecting and Empowering Indigenous Knowledge

Resource Guide

Indigenous Evaluation: Respecting and Empowering Indigenous Knowledge

by Richard Nichols (Santa Clara Pueblo), B.S., and Joan LaFrance (Turtle Mt. Chippewa), Ed.D., MPA

BASKET WEAVING DEMONSTRATION. Photo courtesy of Ed LeBlanc, Archivist, Institute of American Indian Arts.

INTRODUCTION

Though based on Western research models, it has been said that evaluation is a practical craft; evaluators engage in the craft to contribute to program quality. Given this nod toward practicality, evaluators are free to explore cultural ways of knowing different from those traditionally taught in the Western epistemological tradition.

This is especially true when such exploration contributes to the usefulness and validity of evaluation within the program operations context. Just as action research models have evolved, evaluation practice has become more collaborative and responsive to evaluation stakeholders, including American Indian tribes, schools, and communities. Indeed, evaluation capacity building has become an embedded principle in such theoretical models as empowerment evaluation.

The American Indian Higher Education Consortium (AIHEC)'s Indigenous Evaluation Framing project is described elsewhere in this issue. Funded by the National Science Foundation, the project informs and creates evaluation designs that ensure validity and reliability based on indigenous ways of knowing and core values common to most, if not all, Indian communities. The following evaluation resources provide an overview of indigenous evaluation as an emergent field.

BOOKS AND ARTICLES

LaFrance, J. (Summer 2004).

Culturally competent evaluation in Indian Country. *New Directions for Evaluation,* No. 102, 39-50. Special issue: In search of cultural competence in evaluation: Toward principles and practices. Jossey-Bass and the American Evaluation Association.

Conducting culturally competent evaluation in Indian Country requires an understanding of the rich diversity of tribal peoples and recognition of Indian self-determination and tribal sovereignty, according to Dr. Joan LaFrance's chapter in this special issue. If an evaluation can be embedded within an indigenous framework, it is more responsive to tribal ethics and values. She says appropriate tribal protocols should be utilized for evaluation and argues that an indigenous orientation to evaluation has specific implications for the use of appropriate methodological approaches, for partnerships between the evaluator and the program, and for reciprocity.

LaFrance, J. & Nichols, R. (In Press). *Summary report: Stories from the focus groups on an indigenous framing for evaluation.* Alexandria, VA: American Indian Higher Education Consortium (AIHEC).

Developed with support from the National Science Foundation (NSF), this document highlights regional focus groups conducted as phase one of the Indigenous Evaluation Framing project. Three focus groups were conducted in the Southwest, Northwest, and Central Plains region inviting American Indian cultural traditionalists, educators, and evaluators to consider how to assess program merit or worth from a traditionalist perspective.

Based on a concept of evaluation as a joint journey between the evaluator and evaluation stakeholders to "create knowledge about a program," the focus group participants' information is being used to develop a training curriculum on indigenous evaluation. Information was collected about tribal experiences with evaluation and cultural values regarding knowledge, judgment, and assessment of what is valued in Indian education. The stories also provide advice on practice and methodological implications for evaluation in American Indian communities. The Summary Report will be available at the AIHEC website (www.aihec.org) in Winter 2007.

The National Science Foundation, Directorate for Education and Human Resources, Division of Research, Evaluation, and Communications. *The Cultural Context of Educational Evaluation: The Role of Minority Evaluation Professionals.* Workshop Proceedings, June 1-2, 2000.

Since the 1990s, the National Science Foundation (NSF) has been concerned with increasing the capacity of evaluation practitioners in order to provide high quality evaluation services more responsive to minority concerns and community needs. This 2000 workshop was held to discuss issues related to increasing the supply of minority evaluators for mathematics and science programs and projects. Since then, the senior staff of NSF's Division of Research, Evaluation, and Communications has worked with the American Evaluation Association (AEA) to promote more minority participation in AEA's annual meetings and in its publications. NSF is in the process of developing theoretical models for training and capacity building in evaluation – models that will incorporate contextual factors and their influence on the process of evaluation.

The National Science Foundation, Directorate for Education and Human Resources, Division of Research, Evaluation, and Communications. *The Cultural Context of Educational Evaluation: A Native American Perspective.* Workshop Proceedings, April 25-26, 2002.

The National Science Foundation sponsored this 2-day workshop to discuss issues of culturally responsive educational evaluation pertinent to Native Americans. The goal of this workshop was to offer direction for future planning of NSF evaluations and research activities and to focus on capacity building within the field of educational evaluation. Participants included evaluation and education experts from a variety of tribes and experience in national organizations, federal agencies, and schools and higher education institutions across the nation. This workshop was structured around three major themes:

- evaluation issues relating to the academic achievement of Native American students;
- education/training opportunities for Native American evaluators; and
- developing, maintaining, and expanding a network of Native American evaluators.

The discussions highlighted the history of research exploitation in Indian Country, which raises issues for evaluation. Evaluation is different from research in that it should respond to programs and not the Western notion of empiricism, which is the goal of research.

Participants noted that evaluation in Indian Country should be attentive to community ownership and participation, as well as traditional protocols and codes of ethics. It was noted that creating a cadre of Native American evaluators was only in its beginning stages and that there was a need for continued support from federal agencies such as NSF to keep the momentum going.

Evaluation should not be an "underfunded afterthought," doing only summative evaluation is passé. Evaluation should be formative, positive, developmental, and ongoing.

Furthermore, evaluations should involve not only administrators but also "frontline educators" and community members in the interpretation of data and their implications.

This resource, based on the input of many recognized experts in Indian education, provides an important introduction to the evolution of evaluation. New theoretical models (such as participatory, collaborative, and empowerment approaches) are being developed and implemented in Indian Country. The document can be downloaded at www.nsf.gov/pubs/2003/nsf03032/start.htm.

Nelson-Barber, S., LaFrance, J., Trumbull, E., & Aburto, S. Promoting culturally reliable and valid evaluation practice. In S. Hood, R. Hopson & H. Frierson (Eds.) (2005), *The Role of Culture and Cultural Context In Evaluation.* Greenwich, CT: Information Age Publishing.

This chapter describes the authors' work with diverse communities, especially their work in Indian communities. The authors describe how contemporary approaches to evaluation (participatory practices, empowerment evaluation, etc.) alone cannot ensure cultural responsiveness. They outline standards for extemporary evaluation practice that considers cultural context and audiences. They argue that these standards suggest a new paradigm and roles for evaluators.

Senese, G. The PENAL Project: Program evaluation and Native American liability. In S. Hood, R. Hopson, & H. Frierson (Eds.) (2005), *The Role of Culture and Cultural Context In Evaluation.* Greenwich, CT: Information Age Publishing.

In this provocative chapter, Senese argues that cultural competency and responsiveness is important in evaluation. However, it fails to call attention to the ways in which the culture of capitalism feeds the culture of racism and the structural inequalities of oppressed people. He evaluated a community wellness program connected to a Navajo school.

Smith, L. T. (1999). *Decolonizing methodologies: Research and indigenous peoples.* London: Zed Books, Ltd.

This seminal text challenges Western research practices and advocates for the development and use of indigenous research methodologies that are more inclusive of indigenous "cultural protocols, values and behaviors" (p.15). Linda Smith, a Maori academician, notes that "research is not an innocent or distant academic exercise." It occurs within "a set of political and social conditions" (p. 5). Chapter 8 of Smith's text, "Twenty-Five Indigenous Projects," provides generalized descriptions of research *projects*, i.e., research activities, which can resonate within an evaluation context in other Native communities.

White, C. & Hermes, M. Learning to Play Scholarly Jazz: A Culturally Responsive Evaluation of the Hopi Teachers for Hopi Schools Project, in S. Hood, R. Hopson & H. Frierson (Eds.) (2005), *The Role of Culture and Cultural Context In Evaluation.* Greenwich, CT: Information Age Publishing.

The authors describe the tensions involved in planning a culturally responsive evaluation study of the Hopi Teachers for Hopi Schools Project (HTHS). They were concerned with the problem of using "colonial" research tools and the English language in a program developed for and by tribal people. Using the metaphor of jazz, which they describe as a music form that offers the possibility of hearing the world differently, the authors explain how they approached program design and evaluation to be responsive and culturally appropriate. Using pragmatic, strategic, and self-reflective methodological approaches, they list methods for their evaluation that are comprehensive as well as responsive. They describe how they will explore new forms of presenting final reports that are culturally valid and open new ways of knowing.

"evaluators are free to explore cultural ways of knowing."

OTHER RESOURCES

American Evaluation Association. Guiding Principles for Evaluators. www.eval.org.

Evaluation practitioners interested in how other professional evaluators view their craft might find the American Evaluation Association (AEA's) principles of interest. AEA strives to promote ethical practice in the evaluation of programs, products, personnel, and policy. The principles are: (a) systematic inquiry, (b) competence, (c) integrity/honesty, (d) respect for people, and (e) responsibilities for general and public welfare. AEA has an Indigenous Peoples Topical Interest Group comprised of Native educators and evaluators who are American Indian, Hawaiian, and Maori, as well as non-Native educators and evaluators practicing in Native communities. www.eval.org/aboutus/organizations/tigs.asp.

Aroturuki me te Arotakenga. (Ministry of Maori Development),

Te Puni Kökiri (Monitoring and Evaluation Branch), 1999. *Evaluation for Maori: Guidelines for Government Agencies*. www.tpk.govt.nz/publications/subject/default.asp.

The Te Puni Kökiri is required to monitor and act as a liaison with each New Zealand government department and agency that provides — or has responsibility to provide — services to or for Maori people. The purpose of this monitoring function is to ensure the adequacy of services, based on the governmental treaty responsibility and priorities for serving the Maori population (which is approximately 20% of the population). The branch also advises appropriate evaluation systems for Maori. These guidelines were developed to ensure the collection of appropriate and quality information by agencies undertaking evaluations. The guidelines are a set of minimum critical success factors that should be considered by agencies when evaluating their programs. The guidelines include ethical issues for consideration, ensuring that Maori are involved in evaluation planning and that their participation is built into the evaluation design, as well as the analysis of data and reporting of evaluation findings. They include many practical considerations that may be applicable to evaluators conducting evaluations in Indian communities. The documents are all freely downloadable.

Kamehameha Schools. Evaluation Hui. www.ksbe.edu/pase/pdf/EvaluationHui/03_04_17.pdf.

This Native Hawaiian *hui* — meeting or group — was borne out of the question of whether current approaches and methodologies for program evaluation and research were appropriate for the Native Hawaiian population. The hui is comprised of evaluators, program administrators, researchers, and educators that serve the Native Hawaiian population. In collaboration with New Zealand Maori colleagues, the hui serves as a forum for the exchange of knowledge, ideas, and experiences about culturally responsive methods and protocols for the evaluation of programs serving these two indigenous cultures. The Evaluation Hui's vision is to create and initiate evaluation methods and outcomes that benefit the Kanaka Maoli and Maori. Their website contains a digital library of publications that document the conceptions and progress of the Evaluation Hui. The documents are all freely downloadable.

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Guiding Principles for Evaluators

AEA Guiding Principles for Evaluators

AMERICAN EVALUATION ASSOCIATION

A. Systematic Inquiry: Evaluators conduct systematic, data-based inquiries, and thus should:

1. Adhere to the highest technical standards appropriate to the methods they use.
2. Explore with the client the shortcomings and strengths of evaluation questions and approaches.
3. Communicate the approaches, methods, and limitations of the evaluation accurately and in sufficient detail to allow others to understand, interpret, and critique their work.

B. Competence: Evaluators provide competent performance to stakeholders, and thus should:

1. Ensure that the evaluation team collectively possesses the education, abilities, skills, and experience appropriate to the evaluation.
2. Ensure that the evaluation team collectively demonstrates cultural competence and uses appropriate evaluation strategies and skills to work with culturally different groups.
3. Practice within the limits of their competence, decline to conduct evaluations that fall substantially outside those limits, and make clear any limitations on the evaluation that might result if declining is not feasible.
4. Seek to maintain and improve their competencies in order to provide the highest level of performance in their evaluations.

C. Integrity/Honesty: Evaluators display honesty and integrity in their own behavior, and attempt to ensure the honesty and integrity of the entire evaluation process, and thus should:

1. Negotiate honestly with clients and relevant stakeholders concerning the costs, tasks, limitations of methodology, scope of results, and uses of data.
2. Disclose any roles or relationships that might pose a real or apparent conflict of interest prior to accepting an assignment.
3. Record and report all changes to the original negotiated project plans, and the reasons for them, including any possible impacts that could result.
4. Be explicit about their own, their clients', and other stakeholders' interests and values related to the evaluation.
5. Represent accurately their procedures, data, and findings, and attempt to prevent or correct misuse of their work by others.
6. Work to resolve any concerns related to procedures or activities likely to produce misleading evaluative information, decline to conduct the evaluation if concerns cannot be resolved, and consult colleagues or relevant stakeholders about other ways to proceed if declining is not feasible.
7. Disclose all sources of financial support for an evaluation, and the source of the request for the evaluation.

D. Respect for People: Evaluators respect the security, dignity, and self-worth of respondents, program participants, clients, and other evaluation stakeholders, and thus should:

1. Seek a comprehensive understanding of the contextual elements of the evaluation.
2. Abide by current professional ethics, standards, and regulations regarding confidentiality, informed consent, and potential risks or harms to participants.
3. Seek to maximize the benefits and reduce any unnecessary harms that might occur from an evaluation and carefully judge when the benefits from the evaluation or procedure should be foregone because of potential risks.
4. Conduct the evaluation and communicate its results in a way that respects stakeholders' dignity and self-worth.
5. Foster social equity in evaluation, when feasible, so that those who give to the evaluation may benefit in return.
6. Understand, respect, and take into account differences among stakeholders such as culture, religion, disability, age, sexual orientation and ethnicity.

E. Responsibilities for General and Public Welfare: Evaluators articulate and take into account the diversity of general and public interests and values, and thus should:

1. Include relevant perspectives and interests of the full range of stakeholders.
2. Consider not only immediate operations and outcomes of the evaluation, but also the broad assumptions, implications and potential side effects.
3. Allow stakeholders' access to, and actively disseminate, evaluative information, and present evaluation results in understandable forms that respect people and honor promises of confidentiality.
4. Maintain a balance between client and other stakeholder needs and interests.
5. Take into account the public interest and good, going beyond analysis of particular stakeholder interests to consider the welfare of society as a whole.

WWW.EVAL.ORG

Readings

The papers and articles in this section provide information that support the AIHEC Indigenous Evaluation Framework. We share them to suggest further reading in evaluation and assessment.

feasibility of doing experimental or quasi-experimental designs to evaluate the success of CBE interventions. The Symposium was led by a panel of researchers and experts in Indian Education.

255 "The Centrality of Practice to Evaluation" by Thomas A. Schwandt

This is a conceptual discussion of the importance of recognizing the complexity involved in teaching and other delivery of social and health services. The author cautions against over reliance on evaluation and research methods that tend to treat teachers and social workers as "instruments" who can succeed in their practice if only they use "treatment" that are "evidence-base." He describes the dynamics involved in the relationship of the practitioner to their practice. He argues for balance in the use of evaluation methods.

266 "Making Assessment Practices Valid for Native American Students" by Sharon Nelson-Barber and Elise Trumbull

This article reviews the literature and research on student assessment and argues that the test-based accountability driven by the policies of No Child Left Behind may be marginalizing students. The authors offer examples of sources of bias in assessment. They describe alternative and more culturally relevant approaches to assessment.

289 "Culturally Competent Evaluation in Indian Country" by Joan LaFrance

The author describes her experience adapting evaluation practice when working in tribal situations. She argues that evaluators need to understand the diversity in Indian Country. The article concludes with advice regarding evaluation methods.

301 "Evaluation Issues Relating to the Academic Achievement of Native American" by the National Science Foundation

This paper presents the presentations of Eric Jolly and Rosemary Christensen and comments by Grayson Noley. The papers and discussion were presented at a special meeting of the National Science Foundation. The workshop proceedings titled "The Cultural Context of Educational Evaluation: A Native American Perspective" is available at the National Science Foundation, document NSF 03-032.

326 "Researching Ourselves Back to Life: Taking Control of the Research Agenda in Indian Country" by Joan LaFrance and Cheryl Crazy Bull

This chapter from the *Handbook of Social Research Ethics*, edited by Donna Mertens and Pauline Ginsberg and published by Sage Publications, describes the growing movement among tribes to control research through Internal Review Boards and other regulatory measures. It explains how this movement is influencing research and evaluation for both non-Indian and Indian evaluators and researchers.

Indigenizing Evalution Research

Indigenizing Evaluation Research

How Lakota Methodologies Are Helping "Raise the Tipi" in the Oglala Sioux Nation

PAUL ROBERTSON, MIRIAM JORGENSEN, AND CARRIE GARROW

At a 1998 meeting of Elders and spiritual leaders convened to consider how best to meet the needs of children and families on the Pine Ridge Reservation, the late *wakan iyeska* ("spiritual interpreter") Matthew Zack Bear Shield remarked, "When we followed the Lakota ways and spiritual laws of the universe, the people flourished. Because we went away from the Lakota spiritual calendar, our people suffer and are in chaos."[1] The spirit of Bear Shield's remark, that the knowledge and practice of *lakol wicohan* ("Lakota ways") are a means of overcoming the colonial oppression the Oglala Lakota *oyate* ("people") continue to experience, resonates with an increasingly large constituency in Lakota country. Efforts to recover and actively use traditional knowledge and practices are evident in ongoing work to, for example, advance treaty rights, design interventions for families and children, create more effective institutions of governance, and address conflict and crime. Critically, these efforts also include the recovery and use of Indigenous approaches to research and evaluation, processes of knowledge creation that were once under Indigenous control but have been supplanted by Western ways of knowing promoted by the "scientific community" and non-Native government bureaucracies.

This article documents a currently unfolding example of that reclamation, which originated from the desire of evaluators of the "Comprehensive Indian Resources for Community and Law Enforcement" (CIRCLE) Project to make the federally mandated evaluation as useful to the Oglala people as possible. Using the models of participatory action research and empowerment evaluation, the CIRCLE Project evaluation team has arrived at a way of working that mirrors the Lakota approach to

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research and evaluation—an approach grounded in the ideas of *wopasi* ("inquiry") and *tokata wasagle tunpi* ("something you set up to go to in the future"), which views research and evaluation as the process of creating knowledge in order to accomplish an end that is desired by the people.

By embracing this process the CIRCLE Project evaluation team, of which we are members, has found that the recovery of one set of traditions (concerning Indigenous approaches to evaluation) has become inextricably intertwined with the recovery of another set (concerning Indigenous governance). CIRCLE Project research and evaluation, guided by Lakota methodologies, have become vital supports in the "nation building" efforts undertaken through CIRCLE, in which Lakota people are seeking to improve the administration of criminal justice by rebuilding key justice institutions to reflect community needs and culture.

"Nation building" is a term used increasingly in the literature and by leaders in Indian Country to refer to the process of constructing effective institutions of self-governance that can provide a foundation for sustainable development, community health, and successful political action.[2] In other words, it is the process of promoting Indian self-determination, self-governance, and sovereignty—and, ultimately, of improving tribal citizens' social and economic situations—through the creation of more capable, culturally legitimate institutions of governance. The term echoes the intentions in the treaties tribes signed with foreign sovereigns (including the United States) in the postcontact period and embraces Chief Justice John Marshall's admission that American Indian tribes are "domestic dependent nations" and Vine Deloria and Clifford Lytle's more palatable term, "the nations within." By calling attention to tribes' nationhood, the term emphasizes the fact that tribes are not vestigial elements of American society, but an enduring *yet separate* part of it. Additionally, the term acknowledges that Indian nations need governing institutions capable of dealing with contemporary issues—be they problems of crime, financial management, mental health, or international trade—and that tribes must make conscious efforts to build Indigenous institutions that are up to the task. Viewed through the powerful lens of nation building, research and evaluation, or *wopasi* and *tokata wasagle tunpi,* are also tools in service of the Oglala Lakota *oyate*'s even larger goals of decolonization and liberation.

THE DESIRE FOR INSTITUTIONAL CHANGE

On January 16, 2000, a group known as the Grassroots Oglala Lakota Oyate peacefully took control of the building that houses all executive and legislative offices (including the Tribal Council chambers) of the Oglala Sioux Tribe (OST). In occupying the Red Cloud Building, the Oyate was protesting what it considered the Tribal Council's misappropriation and misuse of funds. Through the takeover the Oyate sought the removal of the tribal treasurer, a full audit of tribal finances and land transactions, and a restructuring of the tribal constitution to reflect traditional Lakota governance processes. Indeed, many associated with the Oyate, either as members or supporters, noted that the heart of the takeover was the need to change the structure of government.[3]

Certainly there is a long history of opposition to the "IRA government" at Pine Ridge. While the Oglala Sioux Tribe accepted the provisions of the Indian Reorganization Act (IRA) on October 27, 1934, by of vote of 1,169 to 1,095, this was a very slim margin for the passage of a "constitutional" vote.[4] Moreover, some of the positive votes may have been based on the anticipation of material benefits—perhaps even the return of the Black Hills—rather than on informed opinions about the act.[5] Work on the constitution itself began shortly thereafter, work that many members of the constitutional committees found frustrating; they were required to base their product on a model and checklist provided by the Office of Indian Affairs, the elements of which were promoted without regard for Indigenous governance traditions.[6] From the moment the constitution was inked, the tension between effectively imposed Western-style institutions of governance and models more closely matched to Lakota culture has pervaded Oglala political life.

The Indigenously formed Treaty Councils on the Rosebud and Pine Ridge Reservations were early, prominent challengers to the tribes' IRA governments. Both refused to disband or to recognize the authority of the IRA Tribal Councils. The Treaty Council at Pine Ridge also registered its disapproval through protest votes and resolutions, including a 1937 resolution to "abolish the new Indian Reorganization" on the grounds of financial malfeasance by Tribal Council members. Similar sentiments underlay the Treaty Council's 1939 petition to the federal government for a tribal referendum on the repeal of the Oglala constitution; it was

never called, although the tribal president was impeached in 1941 for embezzlement.[7]

In 1973 the events now known as "Wounded Knee II" grabbed headlines when the U.S. government deployed federal marshals and the military against protestors occupying the historic village of Wounded Knee. While the occupation was part of a larger battle over American Indians' civil and political rights, it was also a protest against the Oglala Lakota nation's federally sanctioned government. Then tribal president Richard (Dick) Wilson was viewed by many as having violated the trust of the Lakota people by turning both Bureau of Indian Affairs (BIA) police and his own vigilante civilian supporters (the so-called goon squad) against community members and for engaging in the mismanagement of tribal funds, corruption, and nepotism. Lakota people who were part of the popular movement that supported the occupation advocated replacement of the IRA government with one based on Lakota tradition and the authority of the 1868 Fort Laramie Treaty.[8]

For years after Wounded Knee II, quieter forms of protest and resistance boiled and sometimes prevailed. For example:

- The nine districts throughout the reservation retained their own active governments, and many Lakota citizens viewed them as institutions much closer to the pre-reservation model, which operated at the *tiospaye* (roughly, "extended family") level. These governments sometimes functioned as "shadow governments" to the official government in Pine Ridge Village and were a frequent locus of protest against IRA government action.
- From the mid-1970s onward, several younger, educated Oglala leaders (including Gerald Clifford, Gerald One Feather, and Birgil Kills Straight), applied their energies and talents to support the agendas of Elders (like Frank Fools Crow, Matthew King, and Frank Kills Enemy), who advocated an explicit recovery of Lakota models of governance. Described in English as "flat organization," the idea was promoted in direct opposition to the centralization of resources that characterized the Wilson administration. Seizing the opportunity provided by P.L. 93-638, the tribe contracted its Department of Public Safety and partially achieved this end. The tribally managed department was made subject to district review boards with the power to hire and fire police officers and their lieutenants, and thus for a

time the community was able to bring law enforcement under substantial local control.[9]

- The American Indian Movement and local supporters established KILI Radio in 1983 with the avowed goal of using the airwaves to fight oppression and create social change. Since then its microphones have been open to those willing to engage the broader Oglala community in discussions of governmental actions and institutional appropriateness. In the words of the late Edward Iron Cloud Jr., descendant of Knife Chief who rode with Crazy Horse: "All along I say that people power is our hope . . . This government is over 50 years old. Is it time to change it? IRA placed all this as it is today. We can say we don't want the IRA. Go to the radio and talk because people need to hear these things."[10]

In sum, the Grassroots Oyate's actions in 2000 were one more brick in the wall of dissatisfaction with the IRA government and its institutions. Like the Wounded Knee protest before it, the Oyate protest reflected the enduring aim of establishing a sovereign government based on a Lakota foundation. Also like the Wounded Knee protest, law enforcement and the power of the tribe's IRA government to direct justice institutions to their own purposes were particularly worrisome to the protestors: the Tribal Council removed supervisory authority over law enforcement from the tribal Department of Public Safety (and from its commissioners and community-based review boards) and placed this supervisory authority with the Council's Judiciary Committee. Despite twenty-two years of tribal management the council retroceded tribal criminal investigation responsibilities back to the BIA, and prosecutions in tribal court slowed to a crawl (a slowdown variously attributed to a lack of police officer testimony, poor record keeping, and political machinations).[11]

By the time the last Grassroots Oyate members left the Red Cloud Building over a year after the occupation began, there was a clear sense that while small victories had been won—for example, the recently elected administration and council had pledged to support many of the Oyate's goals—much work remained. The Oyate and their supporters saw the need to continue to challenge inappropriate exercises of government and to work from the grassroots to rebuild the tribe's government, especially its justice institutions.

CIRCLE, ITS DEMANDS, AND ITS POSSIBILITIES

The Comprehensive Indian Resources for Community and Law Enforcement Project

In late 1999 the United States Department of Justice (USDOJ) began funding the "Comprehensive Indian Resources for Community and Law Enforcement" (CIRCLE) Project at Oglala Sioux.[12] CIRCLE's purpose was to provide tribal justice program planners with incentives and opportunities to consider how the individual components of their justice system (courts, police, corrections, and other programs) might better work together to strengthen responses to pressing crime problems and related social issues. Washington-based project planners hoped that with three years of guaranteed grant assistance and a simpler federal funding process, the local challenge could shift away from finding funding for specific justice programs ("here's a grant that will give us some money for probation") to consideration of justice system design. In other words, it was hoped that tribal justice planners would, through CIRCLE, have the breathing room to ask, "How might all the functions within the justice system (as well as available cultural, social, and financial resources) be leveraged to address crime and related concerns?"

Operationally, CIRCLE created a funding collaboration at the federal level between six USDOJ offices/bureaus (the Bureau of Justice Assistance, the Corrections Program Office, the Office of Community Oriented Policing Services, the Office of Juvenile Justice and Delinquency Prevention, the Office of Victims of Crime, and the Violence Against Women Office) and nine grant programs.[13] The collaboration did not commit new funds to Indian Country; rather, it worked to streamline the process by which tribes receive USDOJ money for corrections programs, domestic violence, victim services, youth services, tribal courts, and law enforcement and encouraged the participating Indian nations to develop a single "strategy" for using these funds. ("Strategy" is a specific term used by the CIRCLE Project to capture the idea of using grant funds in coordinated programmatic efforts toward a specific goal.)

At Oglala Sioux the project provided funding to existing and critical new justice functions and programs, including the Department of Public Safety (for both additional police officers and a new correctional facility), the Tribal Court (especially to create probation programs), the

Court Appointed Special Advocates Program, the Runaway and Homeless Youth Program, the SuAnne Boys and Girls Club, the Victims of Crime Office, the Tribal Youth Program, and Cangleska (a nonprofit agency that addresses domestic violence and sexual assault issues). Additional funding was provided for the duration of the project for a CIRCLE coordinator, who was to be responsible for project administration, for spurring collaboration between programs, and for keeping program directors, staff, and supporters focused on the tribe's CIRCLE "strategy."

In providing CIRCLE funding, USDOJ also mandated that the project be evaluated. The National Institute of Justice solicited proposals for a two-phase evaluation, first of the process of CIRCLE implementation at both the federal and tribal levels and second of the impact of the CIRCLE Project within the demonstration communities.

CIRCLE's Demands and Possibilities

Given the great turmoil in the Oglala Lakota nation during the implementation of the CIRCLE Project—turmoil that, in particular, called into question the efficacy of justice and related governmental systems—one may wonder what possibilities there really were to answer CIRCLE's call for more coordinated tribal justice efforts, greater effectiveness from those efforts, and productive evaluation. These questions become even more pointed through close scrutiny of the funding provided by USDOJ. Rather than block grant funds that might be used to fill the gaps wherever they occurred or, more ambitiously, fully reinvent the justice system at Pine Ridge, the funding was tied to particular USDOJ grant programs.

Indeed, the initial CIRCLE strategy and goal submitted to USDOJ by the OST CIRCLE Project reflects a fairly limited vision for the project at Pine Ridge. Tribal CIRCLE planners, working under the close direction of an assistant U.S. attorney for South Dakota, created a plan that set a 20 percent reduction in reservation crime (measured by arrests) as its goal, to be achieved simply by increasing the funding of certain existing programs and starting other programs that fit within the guidelines of the proffered USDOJ grants. A cynical reading of this document might be that, given the very difficult environment in which the project was to be implemented and the relatively weak set of tools implementers were given to work with, CIRCLE was viewed at the tribal level as little more

than a three-year guarantee of a particular pot of funds and set of jobs; if a reduction in crime was what USDOJ wanted to hear about, the tribe would set that as its goal and garner the funds and jobs while it could.

This interpretation proved false. Especially after the tribe hired a well-known community activist and facilitator as the project coordinator, who then drew the directors and key staff of the various programs funded by CIRCLE together for regular "CIRCLE meetings," these local partners began to see great possibilities in the project. Rather than viewing CIRCLE as one more federal government funding fad from which the tribe could draw economic benefit for three years and then move on, tribal partners began to view the project as an opportunity to address justice system rebuilding needs that had been laid bare by the Oyate occupation. Local ownership of the project began to generate a sense of greater possibility.

More evidence that local implementers were developing a stake in CIRCLE can be found in the project's changed goal. A critical shift in the CIRCLE partners' thinking occurred in the second year of funding, when discussions began in earnest about something they had learned in developing and managing their CIRCLE-related programs: weakness in the tribe's formal justice institutions and processes made all their jobs harder. Given this common concern, the partners felt it would make more sense to work toward system strengthening rather than focus narrowly on a 20 percent reduction in crime—a goal that, for many reasons, they also agreed was unattainable.[14] Thus, the OST CIRCLE team revised its goal to focus more directly on the root problem the tribe faced. Their new goal was a nation building and Indigenous knowledge recovery goal: to rebuild the Tribal Court and its associated institutions to reflect community needs and culture.

Eventually, project partners came to describe this goal with several culturally resonant phrases: *oyate wolakota kagapi kte* ("to build a peaceful nation"), *tiwahe oaye yuwosla icupi* ("bringing up the family/home in a healthy way"), and *tiyuwosla icupi* ("raising a tipi"). In Oglala culture the phrase "raising the tipi" is particularly laden with symbolism and meaning, as it incorporates cultural teaching, family responsibility, and tribal duty. Raising the tipi—making a home—is accomplished with relatives. It is done with care and reverence, skill and teaching, and patience and knowledge. Once the tipi is raised, it provides shelter and a sense of place not only to the family who raise it but also to the commu-

nity with which the family shares space and resources. Much of the learning and sharing of culture and appropriate ways of life were taught in the tipi, and so the phrase additionally symbolizes the importance of education, boundaries, respect, family, living together peacefully, and love. "Raising the tipi" signals the CIRCLE partners' goal of working together on justice system reform in order to build a better nation for all community members.

Today, while CIRCLE Project program funding is complete, the project itself has not died. Because local implementers took control of the CIRCLE, linked it to important community goals for tribal justice institutions, and worked to move those ideas forward, the project's spirit lives on through groups such as the Task Force on Sexual Abuse, the Pine Ridge Area Chamber of Commerce, and *Oglala Oyate Iwicakiyapi Okolakiciye* ("the Society to Strengthen/Defend the People and Families"). For example, the former two organizations have picked up CIRCLE's call for court system reform, and the latter (which preexisted CIRCLE but now includes many of the same players) works to improve the effectiveness of government action on a broad range of family-focused issues.

Yet the question remains whether the final demand of CIRCLE—evaluation—can similarly serve the Oglala Lakota nation's needs. Federal demonstration programs often include an evaluation component, and typically these evaluation research grants are awarded to external organizations with high academic and professional qualifications but little stake in the communities in which change is to be studied. Lacking such stake, even the most insightful evaluation research becomes a form of "helicopter research," which drops in for the study period and exits quickly afterward, leaving behind little or no work product that is directly useful to the community. Might there be a way to use evaluation research required by the CIRCLE grant to produce direct community benefits? In particular, considering the OST CIRCLE Project's activist goals and the fertile environment at Pine Ridge for activism on justice issues, might there be a way to harness more of the resources and outputs of the evaluation to these purposes?

We believe the answer is yes. Through a partnership between the external evaluators and Oglala Lakota College forged in Phase I (process evaluation), it was possible to transfer a substantial portion of the evaluation funds to the local level and put local researchers in the driver's seat for evaluation design and implementation in Phase II (outcomes

evaluation). This shift led to a move from a more passive "theories of change" evaluation methodology toward activism-oriented approaches in the tradition of "participatory action research" and "empowerment evaluation."[15]

Since the advent of colonization, the Oglala Lakota, like other Indigenous peoples, have been the objects of research by outsiders (and continue to be).[16] Frequently, such research is for the benefit of the researcher only; even when billed as in tribal interests (for the creation of better Indian policy, for instance), research has often served the interests of powerful others rather than the needs of the populations being studied. This was the point of Deloria's scathing critique in the 1974 manifesto *Custer Died for Your Sins:* "Behind each policy and program with which Indians are plagued, if traced completely back to its origin, stands the anthropologist."[17]

Deloria went on to challenge researchers to come down from ivory towers, divest themselves of agendas set by narrow academic interests, and use their talents to support American Indians' struggles to improve their conditions. At the same time, but on another continent, in another culture, and working in a different discipline, the Brazilian educator Paulo Freire was developing a parallel political philosophy. Freire critiqued the predominant mode of discourse as *communiqué* and instead advocated *dialog,* a method of discourse, study, and research premised on being and working *with* a people in their struggle for liberation from oppressive social and economic conditions.[18]

The research methodologies of participatory action research and empowerment evaluation have grown out of these (and related) critiques and ideas and presuppose a radical reduction of the subject-object distinction between researcher and researched. They have formed the basis of successful basic and evaluation research with Indigenous peoples around the world and have been the focus of a required course for human service students at Oglala Lakota College since 1987. Thus, because of their appropriateness, promise, and local acceptance, these ideas became the epistemological basis for Phase II of the CIRCLE evaluation at Oglala Sioux. The evaluation team has designed a process that engages the community in research and action toward transformation of the tribal justice system—toward "building a peaceful nation" by "raising the tipi with love." Succinctly, tribal control set the stage for local evaluators to use the evaluation as a means of activism for nation building.

Notably, however, the transition to empowerment evaluation was not effortless. Several factors facilitated the changed approach. Critical ones appear to include the support and encouragement of the outside/national evaluator organization, its ability to channel substantial CIRCLE evaluation funds to the tribal level, Oglala Lakota College's ability to partner with still other organizations to generate more resources for the effort, and the college's developing tradition of engaging in participatory action research projects in the community.[19] Perhaps most significant of all was the evaluation team's realization that a participatory action research process and the Lakota model of research and evaluation are similar. Tribal spiritual leaders reminded the CIRCLE evaluation research team that the Oglala engaged in evaluation research historically, and they used the words *wopasi* ("inquiry") and *tokata wasagle tunpi* ("something you set up to go to in the future") to describe these historical activities. In combination, the phrases signal that Lakota evaluation research has the interests of the people in mind—an orientation that produces the participatory action research process and mirrors the libratory agenda of participatory action research.

EVALUATION FINDINGS AND EMPOWERMENT ACTION—TWO EXAMPLES

Working from an outcomes evaluation template that identifies subgoals of the Oglala CIRCLE Project and possible evidence that these goals are being met, local evaluators are producing a variety of data describing system functioning, system change, and the results of change. As each finding is confirmed, the evaluators seek out ways to share the information with community members and encourage them to use it for action. The stories that follow provide two examples.

Turnover Rate in the Department of Public Safety

Because of the cultural appropriateness of a "flat" organizational structure for law enforcement and of promoting connections between individual officers and local communities (*tiospaye*) within the Oglala Lakota nation, implementing community policing was an important element of the Oglala CIRCLE Project.[20] Thus, for the evaluation it was desirable to produce quantitative evidence of the tribe's movement toward

this ideal. Yet "success" at community policing is hard to measure; alternatively, the evaluation team reasoned that a high police officer turnover rate would be evidence that a transformation toward community policing had *not* occurred.

In order to collect data on turnover, the evaluation researcher working on CIRCLE for Oglala Lakota College sought out the clerk at the Oglala Sioux Tribe Department of Public Safety. The clerk was initially reluctant to provide the evaluation researcher with any information. But because the researcher worked nearby, he returned regularly, reestablishing a friendship with the clerk, whom he had known in high school. As trust between the researcher and Public Safety employee developed, she felt comfortable helping with the research task. The clerk ended up providing turnover-relevant (name-stripped) data on police officers who had worked for the department during and after CIRCLE implementation, and she continues to update this information for the evaluation.

The officer turnover data indicate that community policing has not been effectively implemented in the Oglala Sioux Tribe Department of Public Safety. In the eighteen-month period from April 2002 to September 2003, turnover among all personnel working for department headquarters was 80 percent. Among officers alone, the turnover rate had been 46 percent. Looking just at the twelve-month period from October 2002 to September 2003, the turnover rate for officers was 34 percent, rising to 52 percent when reassignment between districts is taken into account (this last rate is most relevant to community policing, as it takes account of officers who leave the department *and* of officers who stay with the department but leave a particular community).

Certainly these data were useful to the evaluation (despite the negative finding). They were also of immediate use to the tribal community. While they were being compiled, the Bureau of Indian Affairs Division of Law Enforcement Services unilaterally decided that, despite the tribe's P.L. 93-638 contract for law enforcement, OST ought to relinquish management control of the department; the BIA essentially forced the tribe to sign a Memorandum of Agreement with the bureau outlining the tribe's consent.[21] One claim the bureau made in an attempt to justify its actions was that under tribal management very few law enforcement officers had been appropriately trained.

Data from the CIRCLE evaluation offered a clear explanation of why that was so and why it was not the tribe's fault. A grant from the USDOJ

Community Oriented Policing Services (COPS) Office made available through CIRCLE had enabled the department to not only maintain sixty officer positions created through an earlier COPS grant but also increase the department's force size by approximately 15 percent. The larger force, combined with significant officer turnover and limited vacancies at the BIA law enforcement training academy in Artesia, New Mexico, meant there was always a substantial cadre of officers awaiting training. It was disingenuous of the BIA to imply that it could do better.

Armed with this information, the local CIRCLE evaluators prepared reports for community meetings and spoke about the implications of the data for the BIA's claims on their evaluation-related radio show, "Raising the Tipi." By invitation, they spoke at a meeting of the Oglala Nation Education Consortium (an organization that represents all schools on the Pine Ridge Reservation). The feedback received from each of these efforts was that the community found the information valuable in its struggle against the BIA's continued attempts at colonization. Most recently, the newly formed grassroots organization *Wowasake Ikikcupi* ("Take Back the Power") has used the information in its reservation-wide educational campaign for OST governmental reform, including reforms that would lead to a strengthened judiciary and Lakota-based interventions in crime.

Construction of a Criminal Cases Database

While the CIRCLE team had abandoned the explicit goal of reducing crime on the reservation by 20 percent, it nonetheless saw the *measurement* of arrest and prosecution rates as extremely important. Ultimately, the rates were signals of system functioning and strength. Local CIRCLE evaluators began their investigation of these signals with the creation of a database on cases filed in the Tribal Court.

As an aside, it is worth noting that the researcher who took on this task was not hired with CIRCLE evaluation funds. Instead, Fire on the Prairie, a local nongovernmental organization active in social justice issues, paid the researcher through a grant from the Angelina Fund, which was to be used for community action purposes. Thus, the coalescence of goals between the Angelina Fund grant and the CIRCLE evaluation research grant provided more resources for the evaluation effort.

It took approximately eight weeks for this researcher to compile a

database of all the cases filed in the Oglala Sioux Tribal Court in 2002. She describes the process in a memo to her direct supervisor:

> It has been difficult getting the entire 2002 caseload. . . . The files aren't kept in one standard place, any of the court personnel has access to them so they [the files] leave the office and there is no way to locate them. The files aren't being put back where they are found, so you can find files all over the Clerk of Courts office, which is what I am doing now, basically looking everywhere for files.
>
> Attached to the file there is supposed to be a paper trail . . . , i.e. court dates, bond receipt, a disposition, yet there [are] very few files that have any of these beyond papers on court dates and police reports. Some files are lacking names of complainants, birth dates, addresses, and any papers on what was done with them after they were arrested.
>
> It is because of these obstructions that I am having a difficult time getting an accurate assessment of whom the court is actually prosecuting and whom it isn't. I don't know if files are really lacking, if they just aren't finished with their court process, or if they have slipped past the court process.[22]

Another problem the researcher encountered was that files were kept by number and not by name. Hers would be the first work that would be able to identify frequent offenders within the system.

While the data generated remain plagued by the questions raised above (whether or not all the files for the year were found and whether some cases somehow "slipped past the court process"), they indicate that, in 2002, 73 percent of the arrestees were male and that a mere 281 individuals accounted for 46 percent of all arrests.

Again, the local evaluation team prepared these findings in a written report for the community and presented the information on its KILI radio show. Further discussion led the team to incorporate the data into a chart comparing the relatively well-functioning Rosebud Tribal Court with the less well-functioning Oglala Sioux court. Upon request, the team presented the comparison at a meeting called at the local offices of the Casey Family Foundation and to organizational partners in *Oglala Oyate Iwicakiyapi Okolakiciye* ("the Society to Strengthen/Defend the People and Families"). Subsequently, when arguing for increased court funding, even Tribal Council members have cited some of this informa-

tion. Finally, like the police turnover data, these offense data recently have contributed to *Wowasake Ikikcupi*'s campaign for a strengthened tribal court.

REFLECTIONS AND LESSONS

At the time of writing, the Oglala Sioux CIRCLE Project evaluation is ongoing, but already it has led to important lessons learned and valuable reflections on the implementation of an evaluation methodology influenced and guided by Lakota ideas. Positives and challenges uncovered thus far, as well as a more general discussion of the role that quality action-oriented research can play in helping Native nations decolonize and move toward greater self-determination and sovereignty, are presented below.

On the Plus Side

One obvious advantage of the participatory action research and empowerment evaluation approaches, particularly over methods characterized earlier as "helicopter research," is the possibility of paying sustained attention to data collection so that data that might not otherwise be generated are compiled. The construction of the criminal offense database for 2002, accomplished by an intern over the course of nearly two months, is one example; the establishment of rapport by the CIRCLE evaluator with a Department of Public Safety clerk who, after several weeks, felt comfortable enough to provide statistics that were used to compute turnover rates is another.

But it would be a mistake to conclude from these stories that participatory action research and empowerment evaluation are about the manipulation of people in order to obtain data. Instead, the people providing the information, both in the Tribal Court and Department of Public Safety, were willing to help because they understood, through observation of the evaluation process, that the data would be used responsibly, would be shared with the public, and were being gathered as part of a process aimed at changing the system—they understood that this was an Indigenous, Lakota evaluation process.

Evaluation research is often conducted without the knowledge, let alone control, of those who have a critical interest in it. The courts and

law enforcement agencies at Oglala Sioux have been evaluated several times by outside entities in the past fifteen years. Reports from those evaluations provide information about the problems that the people are burdened with, but they are of no help filed away out of public view. The Oglala people, who have a direct interest in knowing the results, have in most cases never even learned of their existence. By contrast, the participatory action research process employed in Phase II of the OST CIRCLE Project evaluation puts a premium on informing people—so that they can deepen their understanding of the systems that frequently frustrate and fail them and use the information to work collectively for change, just as the ideas of *wopasi* and *tokata wasagle tunpi* suggest.

Encouragingly, the evaluation is beginning to involve the Oglala people in the process of changing their criminal justice system. Local evaluators are using a variety of approaches (including radio shows highlighting evaluation findings; written evaluation feedback reports to tribal officials and to the community; presentations to groups like the Oglala Nation Education Consortium; and meetings at which evaluation findings are discussed, interpreted, and used as a springboard for action) to disseminate research findings, and these efforts are making a difference, often in unforeseen ways—which illustrates both the richness of the participatory action research approach and its organic character.

For example, one meeting of grassroots people in Porcupine Community, called for the purpose of discussing evaluation findings, was interrupted by another group of community members who came in asking for help with incidents of gang violence and police brutality that had occurred in their housing cluster earlier in the evening. They had immediately contacted the OST attorney general, who, because she had been involved with the evaluation and had been attending CIRCLE meetings, then directed them to the meeting. The combined groups' response was to plan an emergency gathering of concerned community members, scheduled for the next day at the Porcupine Clinic. More than one hundred people attended, bearing witness to the police's failure to respond to their predicaments; many submitted written reports of police brutality to the Public Safety officers present.

Clearly, the research aided the community, but the community's efforts aided the research as well. While gaps in the needed connections between OST Public Safety, BIA Criminal Investigators, and the South Dakota U.S. Attorney's Office had been a concern during the implemen-

tation of the CIRCLE Project, community members' testimony at the Porcupine meeting underscored their seriousness. Now, because of public concern *and* because of the clear evidence they offer of system functioning or system failure, data on police brutality and reports of serious bodily harm for which there has been no response are part of the Phase II evaluation research effort.

In sum, situating the evaluation effort in the community and using a research and evaluation approach that has cultural resonance has provided some specific advantages to data collection. It also has led us to embrace a constantly evolving evaluation design, as we respond to community cues and direct community input. More notably, the evaluation methodology has promoted active collaboration between the evaluators and Oglala people inside and outside the criminal justice system who share a common interest in "Raising the Tipi," or participating in justice system change. And, instead of being passive objects of research, the individuals involved became "more aware, more critical, more assertive, more creative, and more active."[23] Indeed, this was a phenomenon of empowerment that Oglala organizers in attendance at the Porcupine Clinic meeting later remarked on in discussions about residents' willingness to confront Public Safety officers about police brutality.

Challenges

As it was originally conceived, Phase II of the Oglala CIRCLE Project evaluation was aimed at determining whether CIRCLE project funds had helped to increase collaboration among key components of the criminal justice system and whether such teamwork had positive effects on justice system outcomes. These objectives have been retained, but they also have been transcended by the effort to employ evaluation resources and outputs for the larger goal of system change. As described above, we think the broadened focus on the rebuilding of truly Indigenous institutions is a "plus," although it comes with attendant challenges. Some challenges of the Phase II evaluation are familiar. They are challenges to any evaluation research effort in Indian Country: evaluators must find a way to work with local resources without overtaxing their limited capacity, they must avoid funding dependency, and they must determine how to measure outcomes.

The strains put on Oglala Lakota College's resources are an example of

the burden evaluation research can put on local support structures. With regard to personnel resources, we note that the lead evaluator at the college has taken on the evaluation work as an extra duty, without release time from teaching duties. This is typical; even if the funding available to the local level was completely matched to the research task, it usually is not possible in the tribal college context for a faculty member to "buy" time off from teaching to do research and have another faculty member or adjunct take up the load. Other faculty members already carry full teaching loads, and even in the presence of "available" faculty time, the colleges' small sizes make the overlap of faculty expertise necessary for redistributing the teaching burden unlikely. And of course, the funding available to the local level for such research efforts is usually *not* adequate, making the relative paucity of funding another limiting factor in tribal colleges' ability to individually conduct or even partner in evaluation research. Oglala Lakota College has been able to engage in the empowerment research described above only because the lead local evaluator was able to supplement the CIRCLE evaluation resources provided by the University of Arizona with in-kind contributions from other nonprofit organizations.[24]

Funding dependency is a danger anywhere but especially in the context of extremely scarce resources. While it is certainly a benefit to the Oglala nation that both the CIRCLE Project and its evaluation have been more than a vehicle for short-term job creation, the task that the project and the evaluation have engaged—significant justice system change—is a long-term task. We do not want this work to be dependent on the funds the project brought to the community (funding that is now over) or those that the evaluation brought to the community (Phase II is funded for thirty months). The difficulty will be in continuing the participatory action research process past the grant-related evaluation period; the challenge is finding funding flexible enough to do so.

The third challenge is to measure progress toward the goal of institutional change, of "Raising the Tipi." While the evaluation continues to chart the process of change and gather quantitative information on criminal justice system outputs that may be relevant indicators of change, measuring progress toward the goal remains problematic. Because the goal cannot be reduced to a timeline with objectives and activities (indeed, change within the Oglala Sioux justice system has tended to be nonlinear, ratcheting, and sometimes quite beyond the control of the

tribe and the Lakota people), it is necessary to constantly assess the usefulness of evaluation indicators, include better or different indicators as they present themselves, adjust if system changes make the data irrelevant, and guard the integrity of the data despite a politically charged environment.[25]

In addition to these, the participatory action research and empowerment evaluation approach gives rise to a fourth challenge, one unlikely to be raised by more passive methodologies. This challenge is a direct product of the evaluation's empowerment goals: social and institutional change (here, criminal justice system change) are political propositions of some magnitude; accomplishing such change requires commitment, risk, and perhaps even confrontation.

To the point, the OST criminal justice system, like the IRA government itself, has very limited popular legitimacy, both because it lacks alignment with culturally acceptable forms of justice administration and because it is perceived (probably rightly) as nonresponsive and oppressive. At the same time, there are significant countervailing forces that act to maintain the imposed system, even to the extent of maintaining it in nonworking order. During the Grassroots Oyate's occupation of the Red Cloud Building in 2000, for example, the OST Court, which does not enjoy separation of powers, did not have any power to address the alleged illegal actions of the OST Council. Similarly, it has not been uncommon for council members who have been arrested for assault and other crimes to avoid prosecution and even be illegally freed from jail.

The goal of "Raising the Tipi" identified by the Oglala Lakota *oyate* transcends tinkering, strengthening, or reforming. In the words of Maori researcher Linda Tuhiwai Smith, "It necessarily involves the processes of transformation, of decolonization, of healing, and of mobilization as peoples."[26] The challenge to CIRCLE evaluation researchers is to support those ends.

A Lakota Approach with Universal Themes: Evaluation Research, Nation Building, and the Collective Struggle to Redress Wrongs

The concurrence of the participatory action research/empowerment evaluation approach with Lakota ideas and traditions was an important reason we adopted the methodology for the CIRCLE evaluation. Intriguingly, there are reasons to believe that the methodology may have reso-

nance with not only the Lakota but with a wide spectrum of Indigenous cultures. For example, Budd Hall, an early academic practitioner of participatory action research, notes, "as far as we know, the first uses of the term itself, participatory research, came from Tanzania in the early 1970s. And much of the early momentum behind participatory research came from groups in the dominated nations, who seized upon the ideas as part of the resistance to colonial and neocolonial research practices."[27] In other words, these may be broadly Indigenous approaches to research and evaluation. If this is true, there is even greater import to a question raised earlier—the answers and implications should apply not only in Lakota country, but to all of Indian Country.

Earlier in this article we asked, "Considering the OST CIRCLE Project's activist goals and the fertile environment at Pine Ridge for activism on justice issues, might there be a way to harness more of the resources and outputs of the evaluation to these purposes?" Two assumptions behind the question are that locally controlled research is more ethical and will be more accurate. These ideas accord with a large body of literature in Indigenous studies.[28] But the question is motivated by another point as well, one relevant to nearly every evaluation research project we can think of—that there might (indeed, *ought* to) be a way for required evaluation research to be a resource for achieving community-desired ends.

Just as programs and projects have been designed by outsiders for Indian Country, the "imposition" continues in evaluation research: a funding organization requires an evaluation of how well a program it conceived promotes movement toward ends it desires. Where are the Indigenous people in this evaluation process? How are their understandings of progress and important goals for change incorporated into the evaluation? If Native ideas are not driving the program, how can the products of evaluation research possibly be helpful to the community?[29]

Research conceived of and carried out by outsiders, no matter how well-intentioned, produces a one-way information flow; the parallel with colonial processes of exploitation is keenly appreciated by Indigenous peoples, as it should be by evaluation researchers. When the inherent power imbalance between external evaluators and Indigenous informants is not addressed, there is no opportunity for a virtuous cycle to arise, in which evaluation data are communicated, heard, compiled, returned, assessed, applied, and communicated again. And a one-way flow stands in stark contrast to the information flow that Native people have

relied upon for centuries: "Each generation understands its responsibility to remember stories for its children, and listeners are expected to repeat the stories with accuracy."[30] In Native storytelling the listener and storyteller benefit from the recital of the story, time and again. Likewise, the community-based Native researcher will benefit from the story told by evaluation research data, as will the community itself as the information is used and retold.

We stress this point because we believe it is the crux of useful evaluation research in Indian Country. "Good" demonstration and pilot projects in Indian Country are explicitly part of a nation-building agenda—that is, local people have themselves planned the project and placed it within a larger vision of what they hope their nation will be. Project evaluation can contribute to these nation-building efforts by providing needed feedback to local implementers and activists about what the problems that plague their nations are, how the problems might be solved, and how well the solutions are working. Indeed, we would boldly argue that every evaluation research effort in Indian Country must promote nation building, otherwise it has not been responsible to the community that welcomed the work being evaluated.[31]

Smith makes a similar point when she criticizes outside researchers for assuming that they know what Indigenous communities want and need and that the outcomes of their research projects will help emancipate these oppressed peoples. The story as told by external evaluators is not what Native nations need. "Indigenous peoples across the world have other stories to tell which . . . question the assumed nature of those [external researchers'] ideals and the practices that they generate."[32] If a program or project is designed to benefit a tribe, it is only logical that the people who benefited or failed to benefit from the program or project tell and receive the story of the evaluation. The information gathered through such evaluations is not information "for mankind." Although the data may be beneficial to outsiders, they are most beneficial to the Indigenous nation itself, to improve, refine, reform, or rethink the program or project within its nation-building process. (In fact, it is often the case that the data are truly useful to outsiders *only* after they have been interpreted and used by the Native nation itself to generate appropriate "lessons learned.")

Turning again to the example of the CIRCLE evaluation at Oglala Sioux, the disjunction between insiders and outsiders in terms of data meaning

and usefulness is evident. The turnover rate data may only give outsiders a story about instability in the OST Department of Public Safety. The data told a different, more important story to the internal evaluators. In order to justify its resumption of control over the OST Department of Public Safety, the Bureau of Indian Affairs argued that poor tribal management led to the placement of untrained officers in frontline patrol positions. But the data showed that rapid officer turnover and limited slots at the BIA law enforcement training academy were the real culprits. The data allowed the tribe to challenge the BIA's claims and motives—especially after the BIA's resumption of management suddenly coincided with the opening of more training slots—and to make a firmer stand against U.S. encroachment.

Our finding from CIRCLE, one that we think is universal, is that an empowerment evaluation/participatory action research process provides a way for evaluation researchers, both internal and external to the society, to work together for such purposes. The approach is a blueprint for moving evaluation toward engagement of a people's deep yearning to decolonize and a way for researchers to actively support the work of nation building on Indigenous peoples' terms. Evaluation research becomes a liberating process oriented toward the rebuilding of sovereign, self-determined Native nations. In a participatory action research process, people cease being relatively passive objects of research and assume active control over the research process. They generate the questions, interpret data, and, importantly, use the results of research to develop action plans aimed at transforming their communities. The upending of a typical externally driven process opens a space for "a critical and spiritual form of research"[33] and for the recovery of Indigenous processes of research.

NOTES

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Development, and the Native Nations Institute (a unit of the Udall Center for Studies in Public Policy at the University of Arizona).

1. Richard Two Dogs, personal recollection of meeting in November 1998.

2. See, for example, Stephen Cornell and Joseph Kalt, "Sovereignty and Nation-Building: The Development Challenge in Indian Country Today," *American Culture and Research Journal* 22 (1998): 187–214.

3. Paul Robertson, *Power of the Land: Identity, Ethnicity and Class among the Oglala Lakota* (New York: Routledge, 2002), 199 and 241–46.

4. Specific numbers regarding the IRA's passage can be found in Thomas Biolsi, *Organizing the Lakota: The Political Economy of the New Deal on the Pine Ridge and Rosebud Reservations* (Tucson: University of Arizona Press, 1992), 78; and in Robertson, *Power of the Land,* 172. While the referendum on the IRA was not a vote on a particular constitutional document, it was a "constitutional" vote in a more generic sense—by adopting the IRA, the tribe would be committing itself to an IRA regime and all that entailed, which for many tribes included the creation of a new tribal constitution. With reference to the margin for passage, we note that in the U.S. system, constitutional votes require a supermajority. Even for *day-to-day* decision making, the various Oglala treaty councils use a three-quarters approval rule. Also troubling is the fact that little more than one quarter (28.8 percent) of the Oglala Lakota electorate voted for reorganization.

5. Biolsi, *Organizing the Lakota,* 78–79.

6. Many students of Indian reorganization have pointed out a mismatch between the allowable constitutional forms under the IRA and various Native nations' culturally appropriate forms of government; see, among others, Eric Lemont, "Developing Effective Processes of American Indian Constitutional and Governmental Reform: Lessons from the Cherokee Nation of Oklahoma, Hualapai Nation, Navajo Nation, and Northern Cheyenne Tribe," *American Indian Law Review* 26, no. 2 (2002): 147–76; and Sharon O'Brien, *American Indian Tribal Governments* (Norman: University of Oklahoma Press, 1989). With specific regard to the Oglala Lakota, see Robertson, *Power of the Land,* 191; Biolsi, *Organizing the Lakota,* 92–108; and Stephen Cornell and Joseph P. Kalt, "Where Does Economic Development Really Come From?: Constitutional Rule among the Contemporary Sioux and Apache," *Economic Inquiry* 33 (July 1995): 402–26.

7. These incidents, including the contents of the tribal resolution, are described in Biolsi, *Organizing the Lakota,* 156.

8. For more detail, see Mary Crow Dog and Richard Erdoes, *Lakota Woman* (New York: Gover Weidenfeld, 1990); Vine Deloria Jr., *Behind the Trail of Broken Treaties: An Indian Declaration of Independence* (New York: Delacorte, 1974); and Peter Matthiessen, *In the Spirit of Crazy Horse* (New York: Viking, 1983).

9. This recounting is based on interviews Paul Robertson conducted with Gerald One Feather, Matthew King, and Birgil Kills Straight.

10. Cited in Robertson, *Power of the Land,* 232. The Grassroots Oyate's January 2000 takeover of the Red Cloud Building provides an instructive example of the significant role KILI Radio plays in educating Oglala citizens and bringing them together for social and political ends. The takeover occurred in the afternoon. That evening, community members broadcast a call for supporters to join the seven Oyate members who initiated the protest. Within an hour, their number grew to well over two hundred.

11. Notably, these developments did not undermine all of the progress that had been made between 1973 and 2000 in the transformation of the Department of Public Safety to a more culturally appropriate form. During the Grassroots Oyate protest, the police force was divided, with many officers supporting the protestors in the Red Cloud Building. At one point, the Tribal Council ordered the police to remove the protestors, and they refused. When the council appointed another chief of police, officers sympathetic to the Grassroots Oyate staged their own takeover of Public Safety headquarters and arrested and jailed the hapless new appointee. After that, the Council's Judiciary Committee called upon the U.S. Bureau of Tobacco, Alcohol, and Firearms, the Federal Bureau of Investigation, and Federal Marshals for assistance in removing the protestors—all to no avail.

12. The Oglala Sioux Tribe was not the only CIRCLE Project site. The Northern Cheyenne Tribe and the Pueblo of Zuni also operated demonstration projects.

13. Due to reorganization within USDOJ since CIRCLE's implementation, not all of the CIRCLE funding agencies still exist; some offices' functions have been absorbed into other offices or newly named agencies.

14. There were many reasons to think the early goal was unattainable. For instance, no statistics on exactly what the crime rate was were being kept, and without this baseline, achieving a "20 percent reduction" was impossible. National reports suggested that the crime rate in Indian Country overall was rising at this time, and many CIRCLE partners felt it was unrealistic to think that the trend could be stopped at Oglala Sioux. Due to system weaknesses, few prosecutions were passing through the court, which created a disincentive for police officers to arrest, artificially lowering the "crime rate" as measured by arrests. Moreover, any justice system improvements would likely result in more arrests and make it appear that the crime rate was rising.

15. There are many sources of information on each of these research and evaluation methodologies. We provide a single canonical reference for each. For information on theory of change-based evaluation, see James P. Connell and Anne C. Kubisch, "Applying a Theory of Change Approach to the Evaluation of Comprehensive Community Initiatives: Progress, Prospects, and Problems," in *New Approaches to Evaluating Community Initiatives, volume 2: Theory, Measurement, and Analysis,* ed. Karen Fulbright-Anderson et al. (New York: Aspen Institute,

1999). For information on participatory action research, see Susan E. Smith and Dennis G. Willms, eds., *Nurtured by Knowledge: Learning to do Participatory Action-Research* (Ottawa: International Development Research Centre, 1997). For information on empowerment evaluations, see David Fetterman, "Empowerment Evaluation: Collaboration, Action Research, and a Case Example," http://www.aepro.org/inprint/conference/fetterman.html (retrieved February 26, 2004). Regarding empowerment evaluation, we additionally note that while we like the term, Fetterman's writing and overall approach appear oddly disconnected from the rich complementary literature on participatory action research, which grew out of the struggles of colonized and otherwise oppressed populations to change their situations, has been operational among activists and organizers for nearly thirty years, and is written from multiple disciplinary perspectives, including sociology, education, philosophy, and anthropology.

16. One current research initiative being carried out at Oglala Sioux by a major, out-of-state university seeks to determine how the Oglala would best like to be studied. Another seeks to determine what the quality of life is like on the reservation (although for years the Pine Ridge Reservation has been ranked as one of the poorest areas in the United States in terms of per capita income). It is possible that the results of these research efforts could be used for grant writing, but beyond that it is questionable whether the research, driven by questions developed from afar, will serve to engage people in the struggle to create a better life for themselves.

17. Vine Deloria Jr., *Custer Died for Your Sins: An Indian Manifesto* (New York: Avon Books, 1969), 86. Chapter 4 presents the entirety of Deloria's critique. Oglala Sioux's adoption of the IRA provides an example of the point. The anthropologist Haviland Scudder-Mekeel, who served under John Collier as director of the BIA's Applied Anthropology Staff, played an important role in the creation of the IRA constitution at Oglala Sioux and was in telegraphic communication with Collier concerning the timing of the tribe's vote on the IRA, seeking to synchronize the referendum with the height of sentiment in its favor. See Thomas Biolsi, "The Anthropological Construction of 'Indians,'" in *Indians and Anthropologists: Vine Deloria, Jr., and the Critique of Anthropology,* ed. Thomas Biolsi and Larry J. Zimmerman (Tucson: University of Arizona, 1997), esp. 149–50; and Graham D. Taylor, *The New Deal and American Indian Tribalism: The Administration of the Indian Reorganization Act, 1934–1945* (Lincoln: University of Nebraska Press, 1980).

18. Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 1997).

19. This sentence highlights the fact that empowering local evaluators is not as simple as "give the evaluation research grant to local stakeholders." The CIRCLE evaluation is illustrative. The National Institute of Justice (NIJ), which funded the CIRCLE evaluation, advocated engagement with local partner organizations

yet remained committed to funding an academic and/or professional organization that would meet its perceptions of external reviewers' standards for evaluation outside Indian Country and wanted a product that would address CIRCLE's progress at all three demonstration sites (providing direct funding to three separate tribal organizations would not produce this result). Only through aggressive efforts to maximize funds available for onsite partners and to create a workable division of labor for the site-specific and cross-site reports were the external evaluation organizations (the Native Nations Institute at the University of Arizona and the Harvard Project on American Indian Economic Development at Harvard University) able to create a situation in which both national funder and local tribal interests may be served by the evaluation.

20. For a discussion of what "community policing" might mean in Native communities, see Stewart Wakeling, Miriam Jorgensen, Susan Michaelson, and Manley Begay, *Policing on American Indian Reservations* (Washington DC: National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, 2001), chap. 6.

21. The Memorandum of Agreement's impact on the OST Department of Public Safety was dramatic. Pursuant to the memorandum (which, at this writing, is intended to be effective for two years starting October 1, 2003), the BIA immediately appointed a new chief of police and financial officer. In addition, and echoing the actions of the Tribal Council Judiciary Committee during the Grassroots Oyate's occupation of the Red Cloud Building, it has, without public hearings or community consent, reorganized the department and done away with district assignments and review boards. As noted earlier in the text, these were components of the culturally appropriate "flat organization" embodied in the original P.L. 93-638 contract.

22. Mary Baird, "2002 Public Safety Database Report" (personal memo to Paul Robertson, July 30, 2003).

23. Peter Park, "What Is Participatory Research?" in *Voices of Change: Participatory Research in the United States and Canada,* ed. Peter Park et al. (Westport CT: Bergin and Garvey, 1993), 2.

24. As noted above, Fire on the Prairie, a local nongovernmental organization active in social justice issues, received a grant from the Angelina Fund, which was to be used for community action purposes. The coalescence of goals between the Angelina Fund grant and the CIRCLE evaluation research grant allowed the CIRCLE research effort to benefit from labor paid for by Fire on the Prairie. The Mennonite Central Committee provided a grant that enabled Oglala Lakota College to hire the local evaluator on a full-time basis for the first year of the thirty-month Phase II evaluation, rather than half-time, which is what the University of Arizona grant supports.

25. In other words, an evaluation that could not adapt to unpredicted system

change (system change away from or only obliquely toward the community-envisioned ideal) would not be useful. Already during the evaluation period, as noted in the text, there has been a virtual takeover of the OST Department of Public Safety by the BIA. Additionally, there has been some indication that the BIA would like to install a CFR (Code of Federal Regulations) Court at Oglala Sioux. It is challenging but necessary for the evaluation research to accommodate such changes.

26. Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (London: Zed Books, 2002), 116.

27. Budd Hall, introduction to *Voices of Change: Participatory Research in the United States and Canada,* ed. Peter Park et al. (Westport CT: Bergin and Garvey, 1993), xiii.

28. See, for example, Talal Asad, *Anthropology and the Colonial Encounter* (New York: Prometheus Books, 1974); Biolsi and Zimmerman, *Indians and Anthropologists;* Bea Medicine, "The Anthropologist as the Indian's Image Maker," in *The American Indian Reader: Anthropology,* ed. Jeanette Henry (San Francisco: Indian Historian Press, 1972), 23–28; Devon A. Mihesuah, ed., *Natives and Academics: Researching and Writing about American Indians* (Lincoln: University of Nebraska Press, 1998); and Haunani Kay Trask, *From a Native Daughter: Colonialism and Sovereignty in Hawaii* (Monroe ME: Common Courage Press, 1993).

29. We hasten to note that we are making the argument as starkly as possible in order to make a point. We are not specifically criticizing the National Institute of Justice's approach to the CIRCLE evaluation. In fact, we think NIJ adopted a very good approach. From the beginning, NIJ and the external evaluators worked to redress the typical problems of research and evaluation in Indian Country. NIJ proposed a participatory evaluation, which meant the tribal partners would participate in constructing and implementing the evaluation. When the external evaluators were brought on board, they partnered with local tribal colleges and/or local grassroots organizations as well as the CIRCLE project coordinators. Each site's team (comprised of internal and external evaluators) together developed an evaluation template that reflected local CIRCLE goals and ideas of how best to assess progress. NIJ also convened an evaluation subcommittee of the project overall, and the tribes, along with the federal partners, continually met to assess and discuss the progress of the evaluations at all sites.

30. Devon A. Mihesuah, paraphrasing Angela C. Wilson in Mihesuah, *Natives and Academics,* 3. The complete article by Wilson is "Grandmother to Granddaughter: Generations of Oral History in a Dakota Family," in Mihesuah, *Natives and Academics,* 27–36.

31. Certainly, this paragraph is speaking of an ideal. Not all demonstration and pilot projects are conceived of in a nation-building framework. Indeed, it is un-

clear to us whether CIRCLE always was. See chapter 1, "Opportunities for Moving Forward," in Stephen Brimley, Carrie Garrow, Miriam Jorgensen, and Stewart Wakeling, "Strengthening and Rebuilding Tribal Justice Systems: Learning from History and Looking Toward the Future (Phase I of the Comprehensive Indian Resources for Community and Law Enforcement Evaluation)" (unpublished report, Cambridge MA: The Harvard Project on American Indian Economic Development, 2003). But even when projects and programs are imposed and, hence, merely endured, it may *still* be the case that evaluation research can contribute to nation building—it is difficult, yet possible.

32. L. Smith, *Decolonizing Methodologies,* 2.

33. S. Smith and Williams, *Nurtured by Knowledge,* 173.

Which Links in Which Theories Shall We Evaluate?

4 *If* there **is** little consensus about the assumptions underlying a program, theory-based *evaluators* can collect data relevant to more than one *theory, selecting for* study the *specific* links in those theories that answer key questions.

Which Links in Which Theories Shall We Evaluate?

Carol *Hirschon* Weiss

Theory-based evaluation (TBE) offers many advantages to the evaluator who conducts the study and the program individuals who receive the results. It helps to specify not only the *what* of program outcomes but also the *how* and the why. Theory-based evaluation tests the links between what programs assume their activities are accomplishing and what actually happens at each small step along the way. It also has clear limitations (Weiss, 1997).

Other chapters in this issue explore the opportunities and challenges that enter into the decision to use this approach to evaluating programs. I want to enter the scene after all the actors have decided to take a theory-oriented approach and now have to put the approach into practice. What theory do they use? Do they settle on one theory, or do they consider several theories? In how much detail do they spin out the theories? If they have an elaborated theory (or theories), which links in the theory do they study? What criteria do they use in deciding which links are worth studying?

Studying the Mechanisms of Social Change

TBE is an effort to examine the mechanisms by which programs influence successive stages of participants' behavior. Table 4.1 shows a possible **theory** of a job-training program. **A** theory-based evaluation can examine whether trainees learn the skills taught, whether learning the skills leads to the search for a job, whether the search for a job leads to interviews with prospective employers, whether interviews lead to getting hired, and so **on.**

NEW DIRECTIONS FOR EVALUATION, no. 87, Fall *2000* © Jossey-Bass

Table 4.1. Theory of a Job-Training Program

Program publicizes a job-training program.
    Youth hear about the program.
    Youth are interested and motivated to apply.
Program enrolls eligible youth.
    Youth sign up.
Program provides occupational training in an accessible location.
    Youth attend regularly.
Training matches labor market needs.
Training is carried out well.
    Youth learn skills.
Training teaches good work habits.
    Youth internalize values of regular employment and appropriate behavior on the job.
Program refers youth to suitable jobs.
    Youth apply for jobs.
    Youth behave well in job interviews.
    Employers offer jobs.
    Youth accept jobs.
    Youth show up for work regularly.
Program assists youth in making transition to work and helps with problems.
    Youth accept authority on the job.
    Youth do their work well.
    Youth behave well with coworkers.
    Youth stay on the job.

Source: Adapted from Weiss, 1998, p. 59.

TBE is an attempt to see how far the program succeeds in accomplishing all the intervening phases between enrollment in the program and long-term job holding. If trainees do well all along the route from participation in the training program to staying on a job, there is at least plausible reason to believe that the program was responsible for the trainees' work success. (See Chapter Two by Jane Davidson for further discussion of establishing causality.)

But let us take a step back. Table 4.1 shows the expected steps in the implementation of the program. It is what might be called the *implementation theory* of the program. But *why* are the trainees going to follow through and wind up in long-term jobs? The table does not delve into underlying psychosocial mechanisms. What is going to keep the trainees engaged in what must seem at first an uncongenial period of training? Perhaps the youth are rational enough to want to acquire skills that will help them get ahead in the job market, or perhaps being with a group of peers provides the social support that keeps them engaged, or perhaps program staff instill a sense of group esprit and a sense of excitement about the benefits of work that support the youth in staying with the program.

These kinds of mechanisms are the things that will largely determine whether the implementation theory succeeds in moving through the steps

described in Table 4.1 from the top to the bottom. They are what I would call the real *program theory.* Together, the implementation theory and the program theory can be called the *theory of change* that the program posits as its route to success.

Which Theory to Select

Some programs are designed on an explicit theoretical basis, and a TBE can investigate whether the assumptions of the theory hold in practice. But many programs are the product of experience, intuition, and professional rules of thumb. A theory-based evaluator has to dig to uncover the implicit assumptions underlying the program. Often there are multiple views on what will make the program successful. Take a program that offers counseling to teenagers at risk of dropping out of school, for example. The counselors are young black and Latino men and women who grew up in the same inner-city neighborhood as the teenagers and studied counseling in a nearby community college. They are expected to steer the teens to a better awareness of the advantages of education and to encourage them to stay in school. Some people involved with the program also expect them to help the youth deal with difficult life circumstances, such as an abusive parent or involvement in gang activities. Some program people also expect them to intercede for troubled youth with social workers, police, or probation officers or to help the teens secure services from health clinics or other service agencies.

Several theories of action might be operating. Some people, maybe the program administrators, think that the counselors are role models for the teens. Because of common ethnic backgrounds and life circumstances, the teens can identify with them, will take their words of advice seriously, and will follow a more positive social path. Another theory might be that the counselors understand the perils and pressures that the teens face and will give advice that is better suited to the real world of the inner city than would a middle-class teacher or counselor. They will know how to advise on family problems because of the commonality of their family backgrounds. Another theory might be that the counselors, understanding the local culture, can use threats and penalties effectively, something that white middle-class counselors would be loath to do. Yet another theory is that the counselors will be well acquainted with all the available services in the community and therefore can refer the youth to an appropriate source of help. All of these assumptions grow from the match of counselors to the ethnic and socioeconomic status of the teenagers.

A different set of assumptions would refer to the specific steps and actions that the counselors use in their relations with the teens, perhaps growing from the particular training that they received in the community college. They may have received training in the use of rewards for small steps that a youth takes in a positive direction, such as offering a movie pass for attending school five days in a row. Or they may have been trained to help with the development of peer support groups, where a group of

youngsters help one another maintain good school attendance and proper completion of schoolwork. One might also imagine that a counselor could be effective by tutoring young people in the subjects that give them the most trouble in school and help them overcome cognitive deficits. There are a plethora of theoretical bases on which one might expect the program to be successful in encouraging young people to remain in school and do good work.

If the evaluator is embarking on a theory-based evaluation, which theory does she[1] hook the study to? Does she follow the counselor's encouragement of school attendance? His intervention into family disputes? His referrals to service agencies? His establishment of support groups? His coaching in math? Or what? One study can rarely collect data on all possible activities and their cascading consequences. It would be burdensome to follow each chain of possible events, and the evaluation would become complex and ponderous. Choices have to be made. The evaluator has to decide which of the several theories to track through the series of subsequent steps.

Overall, there are two major sources of theory—the social science literature and the beliefs of program stakeholders. The advantage of social science theories is that they are likely to be based on a body of evidence that has been systematically collected and analyzed. The main disadvantage is that available social science theory may not match the program under review, and even when it does, it may be at such a high degree of abstraction that it is difficult to operationalize in the immediate context. Nevertheless, when social science provides theory and concepts that ground and support local formulations, it can be of great evaluative value (Chen and Rossi, 1987). The evaluator should bring her knowledge of the social science literature to bear on the evaluation at hand.

A way to begin the task of choosing a theory to follow is to ask the program designers, administrators, and practitioners how they believe the program will work. They may have clear-cut ideas about the chain of actions and reactions that they believe will lead to better school achievement of the youth. But it is not unusual to find that different people in the program hold different assumptions about the steps by which inputs will translate into desired outcomes. What can the evaluator do?

First, she can convene a meeting of the stakeholders in the program, perhaps including the youth who are the program's clients, and ask them to discuss their assumptions about how the program will reach the desired results. They should discuss the ministeps of counselor action and youth response that will lead to success. Through such discussion, their originally hazy ideas may become clear, and they may reach consensus about what the program truly aims to do and how it aims to do it.

Program staff will often find a discussion of this type revealing and eminently practical. They will learn what their colleagues assume should be done (and what they are doing). Staff may all be performing the same functions but doing them with different assumptions about why they will be

successful. Or they may actually be doing different things. In discussion, they can find out whether they are working at cross-purposes or are on the same wavelength. If they are working in different directions, the program is apt to be fragmented and ineffective. Staff will often find the effort to reach consensus a stimulating and useful exercise. It may help the program attain coherence and direction.

Including Several Theories

In some instances, some program staffs cannot reach consensus. They have markedly different theories about where they should put their time and what kind of actions they should take in order to engage problem youth in school. In such cases, it may be necessary to include several different theories in the evaluation design. The evaluation can follow the chains of assumption of several theories to see which of them is best supported by the data.

When a number of different assumptions are jostling for priority, a TBE is wise to include multiple theories. If only one theory is tracked, and that theory is wrong or incomplete, the evaluator may miss important chains of action. The final result may show that positive outcomes were achieved but not through the series of steps posited by the theory. The evaluator will be unable to explain how success was attained (see Brug, Steenhuis, Van Assema, and De Vries 1996; Puska, Nissinen, and Tuomilehto, 1985). Or if the program has disappointing results, and only one theory was tracked, the evaluator may face readers who say, "But that's not how we thought good results would come about anyway." When programs rest on fuzzy assumptions, it is often useful for TBE to represent a range of theoretical expectations.

But the more theories that are tracked, the more complex and expensive the evaluation. It is worthwhile to try to winnow down the number of possible theories to a manageable number. Three or four would seem to be the maximum that an evaluator could explore in a single study. How can the evaluator decide which of the several theories is worth including in the evaluation?

Criteria for Selecting Theories

The first criterion is the beliefs of the people associated with the program, primarily the designers and developers who planned the program, the administrators who manage it, and the practitioners who carry it out on a daily basis. Also important may be the beliefs of the sponsors whose money funds the program and the clients who receive the services of the program. What do these groups assume are the pathways to good outcomes? What are the ministeps that have to be taken if the clients are to reap the benefits that the program promises? What the people who are deeply involved in the program believe is critical because their behavior largely determines how

the program runs. When they hold divergent assumptions about the route to success, the several theories that they proffer become candidates for inclusion.

A second criterion is plausibility. Can the program actually do the things that a theory assumes, and will the clients be likely to respond in the expected fashion? The evaluator needs to see what is really going on. One way is to follow the money. Where is the budget being spent? Where is the program really putting its chips? Which resources are they providing for what kinds of assistance? If the program makes available to each counselor a list of accessible service agencies, their eligibility criteria, and hours of operation, then it is a reasonable bet that they think the referral route is important. If nobody gives the counselors any information about available resources, then this theory is probably not an active candidate for study. If program designers and administrators talk a good deal about ethnic match between counselor and client but end up hiring primarily white middle-class counselors, ethnic match is not an operative theory in this program. Similarly, if the counselors do not know enough about plane geometry or nineteenth-century American history to tutor youth, then assumptions about success through tutoring are not apt to be the route to follow (unless the counselors find other people to do the tutoring). The evaluator needs to take a hard look at the program in action, not just in its planning documents, in order to see which theories are at least plausible in this location.

A third criterion is lack of knowledge in the program field. For example, many programs seem to assume that providing information to program participants will lead to a change in their knowledge, and increased knowledge will lead to a positive change in behavior. This theory is the basis for a wide range of programs, including those that aim to reduce the use of drugs, prevent unwanted pregnancy, improve patients' adherence to medical regimens, and so forth. Program people assume that if you tell participants about the evil effects of illegal drugs, the difficult long-term consequences of unwed pregnancies, and the benefits of complying with physician orders, they will become more conscious of consequences, think more carefully before embarking on dangerous courses of action, and eventually behave in more socially acceptable ways.

The theory seems commonsensical. But social scientists—and many program people—know that it is too simplistic. Much research and evaluation has cast doubt on its universal applicability. Although some programs that convey knowledge in an effort to change behavior have had good results, many have been notoriously unsuccessful. In an effort to add to the stock of knowledge in the program arena, an evaluator may find it worthwhile to pursue this theory in the context of the particular program with which she is working. She may want to carefully track the conditions of the program in order to gather more information about when and where such a theory is supported or disconfirmed by the evidence (and what elements of context, internal organization, and reinforcement make a difference).

So much effort is expended in providing information in an attempt to change behavior (through public service campaigns, material posted to Web sites, distribution of printed materials, lectures and speeches, courses and discussion groups, promotional messages disseminated through multiple media) that careful investigation of this theory is warranted. Furthermore so much uncertainty exists about the efficacy of providing information of different kinds to different audiences that program developers need a better sense of the prospects. The evaluator who pursues this theory in a TBE may look to social science theory for a sophisticated understanding of when and where information is likely to have effects and under what circumstances. She can build this knowledge into the evaluation. When the results of the evaluation are ready, she can offer program developers and staff a greater understanding of the extent to which information creates change within the immediate program context. Many studies have shown that information can lead to change in knowledge and attitudes but not often to change in behavior. The current evaluation can examine whether and where the sequence of steps in the theory breaks down and what forces undermine—or reinforce—the power of information.

A final criterion for choosing which theories to examine in a theory-based evaluation is the centrality of the theory to the program. Some theories are so essential to the operation of a program that no matter what else happens, the program's success hinges on the viability of this particular theory. Let us take the example of a comprehensive community program. The program involves the provision of funds (by government or a foundation) to a group of community residents, who then decide which enhancements the neighborhood needs in order to improve the lot of its inhabitants. The residents can choose to use the funds to add more services (mental health, education, and so on), clean up the streets and parks, rehabilitate buildings, hire private police, attract new business to the neighborhood in order to create jobs for local people, begin a car service for elderly residents, or whatever other services they decide are most likely to improve the local quality of life.

An evaluation can study the services chosen and find out the consequences of adding police or rehabilitating buildings or whatever other new services have been added. But a fundamental premise of this community-based approach is that local residents are knowledgeable, committed, hard working, and altruistic enough to find out what is most needed and to go about getting those services into the community. Further, they are assumed to represent the needs and wants of a wide swath of the community. So an underlying theory has to do with the role of citizen groups in developing and directing a comprehensive community initiative. The effectiveness of a group of residents in representing the interests of their neighborhood and securing priority services is key to the success of the program. This assumption becomes a prime candidate for the evaluation.

Which Links in a Theory to Study

Many theories, if drawn out in detail, consist of a long series of interlinked assumptions about how a program will achieve its effects. Let us go back to the job-training program in Table 4.1. If the evaluation does not have the resources or the time to study all of the steps laid out in the theory, which of them should the evaluation explore? Much of the answer to this question will depend on the practicalities of the situation. At what point is the evaluator brought to the scene? Is it after the first several steps have already been taken? How much money does the evaluation have to collect data? How difficult is it to get some kinds of data? For example, what kind of data will the evaluator need in order to know whether the training is carried out well? How will she find out whether the trainees adopt and internalize the values of regular employment? If some kinds of data are difficult or expensive to collect, that will set practical limits.

Second, program staff may have particular concerns about some segments of the implementation theory. They may want to know, for example, whether trainers are giving proper emphasis to good work habits and other "soft skills" or whether the youth in fact learn the occupational skills that the trainers seek to convey. They may want to know whether staff refer them to relevant jobs and whether the youth comport themselves appropriately in job interviews, so that it is clear why they do or do not get jobs.

It may be even more important to examine some links in the program theory about the psychosocial processes that underlie the program. Here is where much of the uncertainty in social programming lies. What impels developing countries to seek to attract more girls into the school system? What gets faculty members in urban universities to teach in interdisciplinary courses in order to retain students in school? In our example, what are the reasons that trainees persist in the training course and learn both job skills and work readiness skills? Is it the capacity of the trainers to develop supportive communities among the youth? Is it the strength of external rewards and punishments?

An evaluation can concentrate on understanding these kinds of mechanisms and the extent to which they operate within the program milieu. The evaluator can collect data on whether peer groups develop during the course of training and the messages and supports that these groups provide to their members. Do youth affiliate in subgroups? Do members of the various groups support the aims of the training program? (Or do they denigrate the effort to learn skills that will yield "chump change"?) Do the trainers actively encourage the formation of subgroups and provide leadership? What messages circulate in the different subgroups about the value of work and the willingness to accept authority on the job? Regarding the theory about external threats, how important to participants in the training program is the reduction in safety net supports?

Because evaluations to date have told their readers relatively little about the *why* of program success and failure, such inquiries may have great resonance. Studies that explore the psychosocial processes of program theory

will have much to tell program designers, lessons (however tentative) that may be suggestive for a whole range of programs.

Criteria for Selecting the Links to Study

The criteria for choosing which links to study are similar to the criteria for choosing which theories to study. Two are probably most important. The first criterion is the link or links that are most critical to the success of the program. It seems wise to invest resources in studying the particular assumption on which the program most basically rests. If the program is predicated on the assumption that what keeps youth enrolled in the full training program is the support of their peers, then that assumption warrants investigation.

The second criterion is the degree of uncertainty about the linkage. If nobody knows whether the assumption is likely to be supported empirically, or if prior studies have produced conflicting findings on the subject, that link may be worthy of systematic study. Some linkages are unsettled in the social science and the evaluation literatures. Some linkages seem to be supported in the social science literature (or in common sense), but evaluations of earlier programs show that they do not work in practice. An example would be the premise of case management within a multiservice program. A large number of multiservice programs have employed case managers who analyze the services that a family needs, locate and coordinate a range of services, and help the family members obtain appropriate services from relevant agencies. The idea of a family coordinator, an advocate and consultant to the family, sounds so utterly sensible that it is unsettling to find that evaluations have usually not found such programs successful (for example, Bickman and others, 1995; St. Pierre, Layzer, and Goodson, 1997). What are the assumptions that underlie case management? What is the case manager assumed to do, with what immediate consequences, leading to what next steps, with what later consequences? Including some of these kinds of links in the evaluation would yield important information.

Conclusion

In selecting the theory or theories to use as scaffolding for a TBE, the evaluator should consider these criteria.

- The assumptions of the people associated with the program. What are their constructions of the interlinked steps by which program inputs are transmuted into program outcomes?
- The plausibility of the assumptions, given the manner in which the program is allocating its time and resources.
- Uncertainty about the applicability of current assumptions. Given the often inchoate or contested nature of available evidence, do these assumptions hold? Under what conditions do they hold?

- The centrality of the assumptions to the program. If the program is based directly on a particular theory, it would be sensible to make this theory the centerpiece of the TBE.

Once the evaluator decides which theory or theories to use for structuring the evaluation, she ought to spell out all the links in the theory chain—what the program will do, how participants will respond, what the program does next, and so on. Many evaluations will not realistically be able to follow all the links in each chain, and the evaluator needs to choose the links on which to focus. Considerations for making that choice include the practicalities of access, resources, and methodological capability for studying given links and the particular knowledge needs of program staff, who want to know which elements of the program they need to modify or shore up.

In making both choices—which theories to select and which links to study—the evaluator needs to consider the underlying *mechanisms* on which the program rests, what I have called the *program theory* in contradistinction to the *implementation theory*. In some cases, the strongest contribution that TBE can make will be to analyze the psychosocial and political assumptions that undergird the program. TBE can then answer the question *why* as well as *how*.

I doubt that TBE should be a routine part of every evaluation. In many programs and for many purposes, an investigation of theoretical assumptions is too elaborate, too demanding, and probably irrelevant. What many program sponsors and managers want to know can be discovered by simpler and less probing strategies. But I also believe that TBE need not be the exhaustive and exhausting exercise that its image sometimes evokes. It can be domesticated and housebroken to fit even quite routine needs, as long as a key interest is *how* and *why* observed results come out the way they do.

It would be nice to think that over time repeated evaluations of a particular kind of program will yield consistent evidence about the validity of the theories on which the program is based, whether pro or con. In my most optimistic moments, I succumb to the notion that evaluations may be able to pin down which links in which theories are generally supported by evidence and that program designers can make use of such understanding in modifying current programs and planning new ones. I would like to believe that replicated evaluations can explain why some apparently commonsensical program strategies fail to work time after time and thus give clues for program improvement. Such hopes are no doubt too sunny. Given the astronomical variety of implementations of even one basic program model, the variety of staffs, clients, organizational contexts, social and political environments, and funding levels, any hope for deriving generalizable findings is romantic. Nevertheless, theory-based evaluation can add to knowledge. Even relatively small increments of knowledge about how and why programs work or fail to work cannot help but improve program effectiveness. And that is what program evaluation is all about.

Note

1. In this chapter, I use the feminine pronoun to refer to the evaluator and the masculine pronoun €or all other actors to avoid the awkward "he or she" construction.

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Bridging Tribal Science Knowledge with Western Science

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Bridging Tribal Science Knowledge with Western Science:
Preserving Native Cultural Knowledge While Achieving Academic Success

Introduction

Knowledge obtained by indigenous people practicing their lifestyles and interaction of their physical and spiritual environments is known as "tribal traditional knowledge." This knowledge is generally passed orally from one generation to another. Tribal traditional knowledge revolves around a system of both knowledge and the processes Indigenous people use to gather that knowledge and pass it on.

Some examples of how this is applied include the discovery of the hanta virus and the 1993 epidemic on the Navajo reservation in northeastern Arizona. Several tribal leaders and professionals from Indian Health Services (IHS) and the Center for Disease Control met to discuss the "mystery illness." For the Navajo (Dine'), excess is considered a form of disharmony. More rain and snow that year brought an abundance of pinion nuts and new vegetation. Navajo oral tradition indicates that this occurred in 1918, 1933, and 1993. Elders noted that many Navajo's died of diseases due to the increase in rodent population and a pinion bumper crop. This tribal traditional knowledge combined with Western medical practice assisted the investigators to identify the "mystery illness" within days.

This integrated scientific approach provides for valuable insights because it augments both the knowledge and expertise from both the tribal and western science approaches. Knowledge obtained from Indigenous peoples' that have span the ages combined with analytically based science provides for solutions to environment and health concerns for those it seeks to serve – tribal Indigenous people. This tribal cultural knowledge can be utilized not only for the environmental or medical/health aspects, but can be incorporated into an educational component as well. This purpose is twofold; one to preserve these oral traditions, stories, songs, languages, and ways and secondly to improve academic achievement for native and non-native students.

Clearly, American Indians, like all cultures, have been using science for all aspects of life - survival. Yet, this local native "cultural knowledge" has not been included in school science curricula. Instead, students are taught science concepts from a Western European science perspective. If a greater number of American Indian students are to succeed academically, it is important to incorporate into the existing curriculum their own cultural knowledge and experiences in order to better understand the concepts being taught in school. Educators should recognize and value that the cultural knowledge children bring to the classroom is just as important as what is being taught in the classroom.

American Indian students are capable of excelling in science education. In part, what makes this possible is the notion that if they are grounded in their own "cultural knowledge," or "funds of knowledge" (Moll et al, 1992; Moll and Gonzalez, 1997), this will further enhance their acquisition and understanding of science concepts. It is a known fact that American Indian students' academic achievement success lag behind other students in many subjects, but even more so in the sciences. However, if American Indian students are grounded in their "native science cultural knowledge" they will better acquire and understand science concepts more readily. When the educational system neglects to accept or dismisses the Native American student's own traditional teachings nurtured in the home and within the local native community, the educational system has lost a valuable educational tool to augment the existing science school curriculum.

The federal government identifies the complexities and understands the challenges faced by American Indian students as they attempt to succeed academically and preserve their traditions, languages

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and cultures. To address this issue, in April 2004, President George W. Bush signed the Executive Order #13336, "American Indian and Alaska Native Education" which recognizes the unique educational and culturally related academic needs of American Indian and Alaska Native students consistent with the unique political and legal relationship of the Federal Government with tribal governments. Its purpose is to assist American Indian and Alaska Native students in meeting the challenging student academic standards of the No Child Left Behind (NCLB) Act of 2001 in a manner that is consistent with tribal traditions, languages, and cultures. The innovations, reforms and high standards of the NCLB Act include an emphasis on research-based instruction that works."

Quantitative and qualitative research is a major issue within Native American education. Empirical research that can be quantified is sorely lacking in Native educational communities. This scientifically-based research project demonstrates that successful research-based instruction is making headway into Native American educational communities including both public and contract schools.

In a day of NCLB and the various states that embrace "English Only" legislation, it is imperative that American Indians, the Indigenous people's of America revitalize, maintain and preserve their language and culture. There are some tribes/bands that are within a generation of losing their language and therefore their culture. American Indians are faced with a dichotomy. They desire to revitalize, maintain and preserve their languages and cultures, yet the programs that have made great strides in achieving this are being eliminated because of the academic standards that now must be achieved through the federal mandate of NCLB.

This research project incorporates both the national and state science standards and at the same time achieves tribal goals of restoring, maintaining and preserving its culture and therefore its identity. This is achieved in a manner consistent with tribal traditions, languages and cultures. This research project serves both purposes - student academic achievement improvement and language/culture preservation, with great success.

In April 2005, The National Conference on Indian Education was held and convened by both the Secretary of the U.S. Department of Education and The Secretary of the Interior. According to both Secretary Spellings and Norton respectively, the purpose of the conference was to continue to move forward on Executive Order #13336 in order to assist American Indian and Alaska Native students in meeting the challenges encountered by the NCLB Act of 2001 in a manner consistent with tribal traditions, languages and cultures.

In addition, Norton stated that "this National Conference on Indian Education is a direct result of that Executive Order, and represents an important step toward closing the education achievement gap in both public and Bureau of Indian Affairs (BIA) funded schools." This order, according to Sections 2 and 3, "builds on the innovations, reforms, and high standards of the NCLB Act of 2001, including; stronger accountability for results, greater flexibility in the use of Federal funds; more choices for parents; and an emphasis on research-based instruction that works."

The desire of this federal interagency study includes, but is not limited to, identifying and disseminating research-based practices and proven methods in raising academic achievement of American Indian and Alaska Native students and assessing the impact and role of native language and culture on the development of educational strategies to improve academic achievement. The plan will compile data, reports, studies, and analyses regarding language standards, Native methodologies, pedagogies, promising practices, and statistics pertaining to American Indian and Alaska Native language and culture as they are statistically related to academic achievement. The Native Science Connections Research Project (NSCRP) successfully provides this research-based instruction that Executive Order #13336 promotes and has integrated it into the school environment.

Developing Culturally Relevant Science Curriculum

In assuring that the cultural science knowledge is integrated into the existing elementary science curricula, curriculum developers must obtain the local native science cultural knowledge and then

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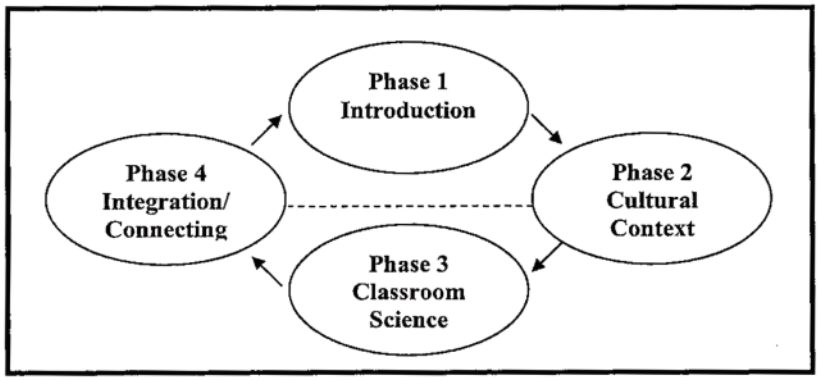
transform this knowledge as science curricula to be "connected" to, or incorporated into the regular elementary school science. McCarty (1980) suggested that culturally relevant curriculum development places importance on community input. In recognizing this, Native educators, elders, Medicine men and women, and other respected adults and students were recognized as cultural "experts" and therefore were consulted to contribute their expertise to the development of the Navajo Science Supplemental Curriculum. In developing such a curriculum that is from an American Indian perspective, one must be concerned with the authenticity of the cultural information (knowledge) being presented.

One major concern is on the appropriateness of the subject matter to be taught. One topic of major importance was on the issue of how to separate science from religion. For most American Indian cultures, science and religion are intertwined and inter-related. This can pose a major concern in developing supplemental science curriculum from an American Indian perspective. For example, in Arizona, religion cannot be taught in public schools. Elders and Medicine men and women also stated that native religious beliefs and rituals should not be taught by public schools. There are culturally specific times during the school year for teaching and not teaching of certain age to learn about certain science topics. Moreover, when the science topic is appropriate to address, we learned that how one goes about studying that topic may be inappropriate. For example, dissecting frogs, while a common practice in American school science, is very inappropriate for the Hopi and Navajo. Obtaining the appropriate knowledge and pedagogy is not an easy task. As a result, culturally appropriate native science knowledge can be transformed into a curriculum that is connected to the regular school science lessons.

The cultural knowledge for the cultural science modules can be culled from various sources that include interviewing elders, Medicine men and women, respected native community leaders and educators, and parents. Informants are to be presented with typical school science topics normally taught in grades 4-6. They then can present their own perspectives on each of the science topics. These include legends, stories, values, respect for nature, nature of the universe, the relationship between the stars, the moon, and the sun, weather patterns, and the relationship between the earth and plants and animals. These conversations and interviews can be recorded and later transcribed. They can be a valuable resource of information in constructing cultural science modules/lessons.

Once the modules/lessons have been written, they can be integrated with the regular classroom science curriculum and tested in the classrooms. The instructional sequence and design criteria (see Figure 1), created by this project, function as a template for science teachers and cultural curriculum developers using the assemblage of modules and lessons which have been designed to integrate a cultural context for teaching scientific concepts to grades 4, 5 and 6. These four instructional sequences are as follows.

Figure 1. Instructional Sequence of the Navajo Supplemental Curriculum



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Phase One, the ***"introduction"*** to the appropriate and specific lesson begins this process. It is here that a topic is chosen and identified. Students are engaged to inquire and explore specific details about a common topic. They are encouraged to identify what is known and the procedure begins for learning the "how" of gathering information and data to substantiate the idea they have chosen. Appropriate ways of organizing data for presentations to classmates, family and the community at large are also taken into consideration, discussed and agreed upon. At this point, the role of the teacher as a "facilitator" can limit or expand the discussion and activity for the topic depending on the grade, skill and ability levels of the students.

Phase Two, the ***"cultural context"*** is where the traditional teachings, stories as they pertain to the science topic to be studied and which have been imparted in an oral tradition are presented here. This includes a vocabulary of specific words in the tribes language with English translations and traditional stories and teachings, traditional uses of certain material and elements are also communicated. The class is introduced to the cultural information and teaching on the topic of focus for each lesson and the traditional protocols for imparting information and knowledge are observed and shared. This part of the process integrates the oral sharing of information and includes field trips in specific surroundings and environment where plants, landforms and other tangible examples within the children's realm or experience can be recognized, identified, explored, explained and their knowledge base on the topic of focus expanded and amplified. Phase two is set as the building block for the children's sense of knowing of self, sense of place, belonging and context, a traditional knowledge data base set on which textbook science can then be integrated.

Phase Three, ***"communicating concepts"*** ideas, and honing skill exercise taught in textbook science is the main ingredient. An objective way of viewing and learning concepts through teacher classroom lectures including other hands-on and inquiry based activities, the written format of textbooks and the use of computer technology and other electronic media to access knowledge and information is introduced to the children at this point. The use of measuring tools, rulers, test tubes, microscopes, telescopes, and cameras for recording and monitoring information is also taught. The western view and approach to learning, teaching and absorbing information about the specific topic becomes the focus of activity. Students are exposed to the process of beginning to think inductively and deductively. It is here that they begin to hone math skills, and learn to develop an objective view in the learning process by identifying the specific topic for study, and guidelines for gathering data. In addition, they are taught how to arrange and organize the material gathered into a format from which observations can be made and conclusions drawn. They are also taught how to present the materials in report form for the class, family and the community in general.

Phase Four, consists of ***"integrating"*** (connecting), phase two and phase three. It involves the blending of two approaches and interpretations of a given set of materials, ideas, facts and information. This harmonious blending of two paths, which lead to the same place of knowing, will afford students the ability to function and perform in both realms. The subjective and objective approach to learning about natural systems and cycles are paths, where one is not exclusive of the other. Thus, it is the goal to create a curriculum of science education materials which is inclusive of and creates a place for traditional cultural belief systems and values while at the same time, it amplifies and expands existing American Indian traditional knowledge bases.

Goals and Objectives

The Native Science Connections Research Project was funded by the National Science Foundation (NSF) and the objectives of this project are to: 1) develop culturally relevant science supplemental curriculum for grades 4, 5, and 6 for four Native Nations and test the general hypothesis that 2) American Indian students will learn the traditional science curriculum in schools, if they are also grounded in their own "native" science concepts and related cultural knowledge, and after exposure to the Native Science Supplemental Curriculum, 3) students will acquire positive attitudes toward science and science education.

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Research Design and Methodology

In order to test the above hypothesis, this research project followed a pre- and post-test quasi-experimental design for collecting quantitative data. The model applied two tests: Full-Option Science System (FOSS) achievement test and the Science Attitude Inventory (SAI) test at the beginning and at the end of the twelve week treatment period. These sets of quantitative data (dependent variables) were subjected to appropriate statistical analyses, ANOVA (analysis of variance) and MANCOVA (multivariate analysis of covariance). A convenience sampling technique was followed to constitute the sample.

For this particular Native Nation, five schools (public and contract), seven teachers and 95 American Indian students participated. The sample consisted of 54 males and 41 female students. 56 were in the control group and 39 were in the experimental group.

Data Collection

Both the experimental and control group participating teachers received intense teacher training on the Full Option Science System (FOSS) treatment materials. In addition to the FOSS training, the experimental group teachers received training in the use and implementation of the Navajo Science Supplemental Curriculum. The same achievement (FOSS) and attitude (Science Attitude Inventory) – SAI) test were administered as pre- and post-test on both control and experimental groups.

Two instruments were used to collect quantitative data: a) Achievement test (open-ended) on FOSS; and b) Attitude test (5 point Likert-type scale) on SAI. Since the Achievement test responses were open ended, inter-ratter reliability was conducted on all 14 questions to identify correct/near correct answers. The inter-ratter reliability coefficient for individual items of the FOSS achievement test was found to be very high (between .80 - .90).

Results compared mean and standard deviation using Student t-test: Independent t-tests with separate variance for group comparisons and paired t-tests for pre- and post-tests comparisons. Independent t-tests were computed on all mean totals of FOSS and SAI to compare control and experimental groups' scores; where as Paired t-tests were computed on paired scores of FOSS and SAI separately for individual control and experimental groups.

Comparison of Experimental and Control Group on FOSS and SAI Means

As mentioned earlier, Independent samples t-tests were computed to determine if there were any significant difference between the control non-treatment and experimental–treatment group on both the pre- and post-tests means of FOSS and SAI. The results with separate variance t-tests on four variables grouped by control and experimental are shown in Table 1.

Table 1: Comparison of Navajo Control and Experimental Group on FOSS and SAI with Independent t-Statistics and p-Significance

Variable	Control Group [n=56]		Experimental Group [n=39]		t-Statistics with DF	Significance of p
Total	Mean	S.D.	Mean	S.D.	Separate Variance	*/**
FOSS Pre-total	4.54	2.18	4.36	1.83	t=0.43; DF = 89.8	p=0.67
FOSS Post-total	6.46	1.72	8.64	2.68	t=4.47; DF = 59.4	p=0.000**
SAI Pre-total	131.00	16.13	134.51	12.14	t=1.21; DF = 92.4	p=0.23
SAI Post-total	136.32	14.45	138.36	13.79	t=0.70; DF = 84.3	p=0.49

Note: ** Significant at p<.01; * Significant at p<.05

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It is apparent that except for the FOSS post-test mean difference between the control and the experimental groups, no other mean-difference on three other variables are statistically significant. The mean-difference projected in Table 1 on both FOSS and SAI tests between the control and experimental groups are summarized in Figures 2 and 3.

Figure 2: Navajo Control and Experimental Group Comparison on FOSS Means

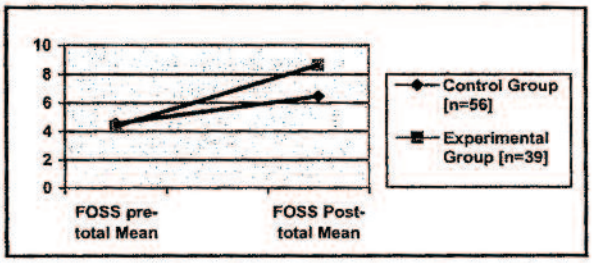
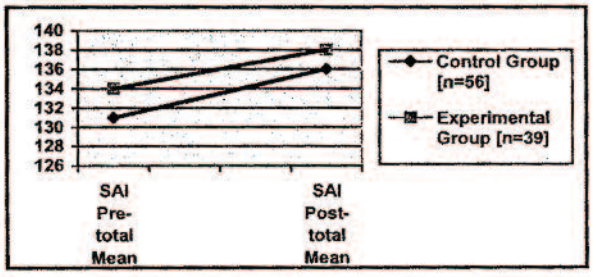


Figure 3: Navajo Control and Experimental Group Comparison on SAI Means



Overall Comparison for Navajo Sub-groups on Pre- and Post-tests

Overall, in the Navajo sub-group, there were some increase in mean scores from pre- to post-test on both the FOSS and the SAI. For this group, the increase in FOSS (2.90) and in SAI (4.72) were statistically significant at p<.01. Taking this sub-group (n=95) as a whole, the gain is shown in Table 2.

Table 2: A Mean and Standard Deviation Comparison of Pre- and Post-tests on FOSS and SAI for the Navajo Sub-group (n=95)

Tests	Pre-tests [n=95]		Post-tests [n=95]		Mean difference	Student t with DF
Type	Mean	S.D.	Mean	S.D.	+/- Gain	P-Significance
FOSS	4.46	2.04	7.36	2.41	2.90	[t=10.45; DF=94] at p = 0.000**
SAI	132.44	14.66	137.16	14.14	4.72	[t=3.63; DF = 94] at p = 0.000**

Note: ** Significant at p<.01; * Significant at p<.05

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Mean Comparison for Navajo Control Group on Pre- and Post-test

Like the overall mean for this sub-group, both the control and experimental groups showed some increase in the mean scores from pre- to post-tests. Table 3 and 4 respectively describes the increase on both FOSS and SAI for the control and experimental groups. For the Navajo control group, the increase in FOSS (1.92) and in SAI (5.32) were statistically significant at p<.01 (see Table 3).

Table 3: A mean and Standard Deviation Comparison of Pre- and Post-tests on FOSS and SAI for the Navajo Control-group (n=56)

Tests	Pre-tests [n=56]		Post-tests [n=56]		Mean difference	Student t with DF
Type	Mean	S.D.	Mean	S.D.	+/- Gain	P-Significance
FOSS	4.54	2.18	6.46	1.72	1.92	[t=6.27; DF=55] at p = 0.000**
SAI	131.00	16.08	136.32	14.45	5.32	[t=3.18; DF = 55] at p = 0.002**

Mean Comparison for Navajo Experimental Group on Pre- and Post-test

For the Navajo Experimental group, the increase in FOSS (4.28) was statistically significant at the p<.01 level; however, the increase in SAI (3.85) was not statistically significant. See Table 4.

Table 4: A Mean and Standard Deviation Comparison of Pre- and post-tests on FOSS and SAI for the Navajo Experimental group (n=39)

Tests	Pre-tests [n=56]		Post-tests [n=56]		Mean difference	Student t with DF
Type	Mean	S.D.	Mean	S.D.	+/- Gain	P-Significance
FOSS	4.36	1.83	8.64	2.68	4.28	[t=10.11; DF=38] at p = 0.000**
SAI	134.51	12.30	138.36	13.79	3.85	[t=1.84; DF = 38] at p = 0.073

Conclusions

This successful model demonstrated both qualitatively and quantitatively that the American Indian students would learn the traditional classroom science curriculum, if they were also grounded in their "native" science concepts and related cultural knowledge. Students who were exposed to the Native Science Supplemental Curriculum (NSSC) comprehended the science concepts better than before. The trend in this research also implied that American Indian students acquired positive attitudes toward science and science education.

The findings of this study suggest that minority cultural knowledge integrated with the traditional science curriculum does not hinder, but rather enhances learning. There are many culturally relevant science curriculums written and being used in schools today. However, the purpose is not to replace the existing science curriculum, but to integrate the students' cultural knowledge, background and experiences to assist students in learning the science concepts. It should be noted that this does not only apply to the sciences, but may be integrated into other subject matters such as social studies, language arts, etc. It is anticipated that these findings will especially encourage other indigenous people to bring into the classroom their respective cultural knowledge.

Finally, while it has been shown that integrating native culture into school science can make a difference in teaching and learning, the researcher strongly believes that this approach is applicable to all schools everywhere. For example, African American students might also improve their science achievement scores, if they are also grounded in African perspectives on science. Anglo American students could also benefit from other cultural views on science. Puerto Rican students in Boston could learn not only about American school science perspectives, but also those of the Boricua (indigenous people of Puerto Rico), and those of other Native Nations.

The relevancy for this particular education research project is that it meets the professional standard of producing evidence-based and scientifically based research. This research has broad implications such that a subsequent NSF multimillion dollar grant was awarded to one of the four Native Nations which continued to "build systematically on the findings of this research" (Education Science Reform Act, 2002).

In addition, an interdisciplinary research project in conjunction with the Environmental Protection Agency (EPA) and a California Band of Missions Indian tribe is on-going. This EPA Indian Environmental General Assistance Program (GAP) grant involves integrating native cultural knowledge by establishing a culturally relevant science database focusing on tribal science knowledge and environmental science based on traditions, language, culture and scientific reports.

Connecting tribal science knowledge with western science can be achieved as demonstrated through the Native Science Connection Research Project. It has done so in a manner that successfully integrates the native cultural knowledge with the western science that is taught within our classrooms across America in a manner that preserves tribal traditions, languages and cultures and improves academic achievement for our students.

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Can Experimental Research be Conducted with Culturally Based Education Interventions: An Assessment of Feasibility

Can Experimental Research Be Conducted with Culturally Based Education Interventions: An Assessment of Feasibility

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Abstract

The present study was conducted to assess the feasibility of conducting experimental research with culturally based education (CBE) interventions. The assessment was made on the basis of a comprehensive review of the relevant literature on culturally based education and a national survey with a sample of 105 CBE programs in 21 states. The literature review shows that much of the extant research on CBE is descriptive. Only six studies use some form of randomized assignment of students to treatment and control conditions. In the national survey, a sizeable number of school administrators indicate that it is feasible to investigate the efficacy of CBE interventions using experimental or quasi-experimental designs. Results of this preliminary study clearly show that CBE is not a unitary concept. It is an eclectic collection of treatments tailored to meet the needs of particular Native student populations in a local school context. To test the efficacy of CBE interventions, the paper proposes the use of a combination of research designs.

Can Experimental Research Be Conducted with Culturally Based Education Interventions: An Assessment of Feasibility

Introduction

Culturally based education (CBE), by expressing the values of the tribe and the community, ensures greater endorsement, involvement, and support by parents and community resources. This in turn strengthens potential associations between student experience and the academic curriculum. Thus, a CBE intervention that is congruent with community goals is maximally efficacious for student academic achievement.

Culturally based education can be considered as a broad-based schoolwide approach that seeks linguistic and social-cultural congruence of the Native student population in all aspects of the school program, but particularly in classroom instruction. Such approaches are more feasible and more likely to occur in school settings where the Native student population is in the majority. The density of a Native student population can also have an impact on the nature of a culturally based education intervention. The capacity to create social linguistic approaches that are congruent with the Native student population is maximized in schools where Native students are a majority of the student population.

CBE interventions incorporate Native language and/or important elements of Native culture. They include broad programs that engage participants for long periods with a high degree of involvement (e.g., all-day immersion programs) and more specific interventions that entail less time and involvement (e.g., a specific language text). By expressing the values of the tribe and the community, culturally based education ensures greater endorsement, involvement, and support by parents and community resources. In some cases it is implemented as a broad-based schoolwide approach that seeks linguistic and social-cultural congruence of the Native student population in all aspects of the school program, but particularly in classroom instruction (Tharp, 1982; Doherty, et al., 2002).

This paper describes a preliminary study to determine whether experimental research can be conducted with CBE interventions. The assessment of feasibility was conducted in two phases. First, a comprehensive review of the relevant literature was conducted to (a) determine the strength of evidence concerning the efficacy of culturally based education, and (b) assess the extent to which previous research indicates that experimental research on such interventions is feasible. Second, a national survey was conducted with CBE programs to determine the feasibility of conducting experimental research with existing interventions using designs that meet standards relating to construct, internal, external, and statistical validity.

Literature Review

The review of relevant literature conducted in the first phase of the study focused on research studies that included (a) some control by the researcher over the assignment of

subjects to treatments, (b) an independent variable that has at least some elements of CBE, and (c) outcome variables associated with school performance or achievement. The review (Demmert & Towner, 2003) included more than 100 citations from various sources, including the ERIC Clearinghouse on Rural Education and Small Schools, Digital Dissertations, DIALOG, ProQuest, Info&Learning, Cambridge Scientific Abstracts, Wilson Social Sciences Index, Anthropological Abstracts, Psychological Abstracts, Social Sciences Index, Sociological Abstracts, resources from R&D organizations, and research reports on bilingual programs that include non-Native students.

Experimental research aside, the review identified six critical elements of CBE interventions as follows:

- Recognition and use of heritage languages
- 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, practice, and demonstrate skills)
- Curriculum that is 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)
- Strong Native community participation (including parents, elders, and other community resources) in educating children and in the planning and operation of school activities
- Knowledge and use of social and political mores of the community

Typically, these critical elements have different emphases and different manifestations from one CBE program to another. It is not known how and to what extent the six critical elements may contribute to program effectiveness. Moreover, the causal linkages between promising CBE interventions and student academic achievement in reading and mathematics are not always evident.

With respect to experimental research, the review yielded only six studies (listed below) on CBE that involved random assignment of individuals to treatment and control conditions.

1. Tharp, R.G. (1982). The effective instruction of comprehension: Results and description of the Kamehameha Early Education Program. *Reading Research Quarterly, 17*(4), 503–527.

2. Omizo, M.M., & Omizo, S.A. (1989). Art activities to improve self-esteem among Native Hawaiian children. *Journal of Humanistic Education and Development, 27*(4), 167–176.

3. Clark, W.J. (1996). *Effect of a computer assisted instruction program on Aboriginal student achievement.* Unpublished master's thesis. Brandon University, Manitoba, Canada. (ERIC Document Reproduction Service No. ED400777)

4. Omizo, M.M., Omizo, S.A., & Kitaoka, S.K. (1998). Guided affective and cognitive imagery to enhance self-esteem among Hawaiian children. *Journal of Multicultural Counseling and Development, 26*(1), 52–62.

5. Kratochwill, T.R., McDonald, L., Youngbear-Tibbitts, H., & Levin, J.R. (2001). *Families and schools together: An experimental analysis of a parent-mediated early intervention program for at-risk American Indian children*. Final Report. Madison, WI: University of Wisconsin.

6. Lipka, J., & Adams, B. (2002). *Improving Alaska Native rural and urban students' mathematical understanding of perimeter and area.* Unpublished manuscript. Alaska School Research Fund.

Half of these studies are unpublished and most are flawed in some way. The external validity of extant research is at best moderate. Only two of the six studies involved multiple schools. The Kratochwill et al. study was conducted with three schools, and the Lipka and Adams study with five schools. The other four studies were each conducted at one school. The statistical validity of existing studies appears to range from weak to moderate. In most instances, the student performance measures are reported to be valid and reliable, and statistical analysis procedures are clearly described. While significant differences are detected between treatment and control groups, none of the six studies explicitly addresses issues related to statistical power and sample size.

As a result of their flaws, the studies do not provide convincing evidence that the CBE programs were effective. On the other hand, they do not demonstrate that CBE is ineffective. There is no convincing evidence one way or the other. Nonetheless, the existing studies show that at least in some situations experimental research with CBE interventions is possible.

There are probably various reasons why there have been so few studies of CBE that achieve design conditions that allow confidence in establishing the efficacy of such interventions. To influence student achievement, the program must be in place and operating with fidelity over a relatively long timeframe, requiring a study of substantial

duration (e.g., multiple years). A longer study costs more and faces more threats to construct, statistical, internal, and external validity. It is not surprising that all six of the studies reviewed here were conducted in a timeframe of one year or less. Research studies on CBE of a shorter duration may be easier to conduct, but the shortened time span can reduce both impact potential and relevance.

Feasibility Survey

For the feasibility survey, we first conducted a comprehensive review of documents (e.g., project applications and narratives) pertinent to existing CBE interventions. The review served a dual purpose: (a) to examine the content of existing CBE programs, and (b) to draw a sample for a national survey to assess the feasibility of conducting experimental research with such programs. The review covered the following programs:

Title VII Indian Education Programs. These grants represent a universe of locations where American Indian and Alaska Native students attend school. They also represent a universe of programs required by the Indian Education Act to provide culturally based education to have a positive impact on the educational achievement of Native students.

Administration for Native Americans Native Language Programs. These are Native language programs funded by the Administration for Native Americans (ANA).

Other Programs. These include total, partial, and two-way Native language immersion programs.

These CBE programs reflect varying degrees of emphasis in five areas:

Culturally Based Instruction (CBI). Culturally Based Instruction represents programs in which the Native language is the language of instruction and/or the language of social interaction, including teaching. These include Native language immersion efforts that encompass the entire school, Head Start immersion, immersion classrooms, and summer camp immersion programs. They include bilingual and two-way immersion efforts as well. CBI includes a range of programs that can have two distinct orientations and purposes: (a) programs that seek to create Native language fluency in a population of learners who do not know their Native language or whose Native language competence is underdeveloped when compared to fluent peers, and (b) programs that seek to provide academic content to learners through their Native language while also developing their Native first-language competence.

Native Language Instruction (NLI). Native Language Instruction differs from CBI in that Native language is the *subject* of instruction. Native students are offered language classes as an elective. Culturally relevant materials may also be used in such courses.

Native Studies Programs (NS). Native Studies represents programs offering classroom instruction in Native history and culture including contemporary events and Native civics–related subject matter, such as treaties and tribal government.

Native Cultural Enrichment (NCE). Native Cultural Enrichment represents programs that offer powwows, presentations by knowledgeable and respected local tribal people, arts and crafts, and culturally related special honoring. These programs bring aspects of Native culture into the school or have students experience them outside the school.

Culturally Relevant Materials (CRM). Culturally Relevant Materials comprise programs that include instructional materials that represent Native students' identity or culture within an existing course or curriculum. Typically, these include reading materials with a Native theme that are brought into a reading program.

For the national survey, a stratified random sample was drawn from Title VII programs by program type and Native student density at a school. All ANA programs that offered school-based instruction were included. In addition, a purposive sample of other programs was selected to participate in the survey. For purposes of assessing feasibility, no attempt was made to achieve a nationally representative sample of CBE programs. The survey sample consisted of 207 programs in 24 states. A majority of them were found in Alaska, Arizona, Hawaii, Minnesota, New Mexico, Oklahoma, South Dakota, and Washington.

The survey consisted of 32 questions in various areas, including program characteristics and feasibility of conducting experimental research. In addition to structured items, the survey included open-ended questions seeking perceptions and opinions from respondents.

The survey was conducted by mail in November 2003. To increase response rate, follow-up procedures (several phone calls to non-respondents) were implemented until March 2004. A total of 105 CBE programs completed the survey questionnaire, providing a response rate of 50.7 percent.

Content of CBE Interventions

Survey results indicate that the CBE interventions served students in pre-kindergarten through postsecondary education. A majority of the participating students were in grades one through eight. About two-thirds (66.7%) of the CBE programs were schoolwide programs. Some served targeted classrooms (19.0%) or targeted students only (17.1%). About half (47.6%) of the CBE programs were focused on teaching a Native language. Some respondents indicated that their programs used a Native language to teach content (30.5%). This included immersion programs in which a Native language was the *subject* of instruction (19.0%), as well as those in which a Native language was the *language* of instruction (21.9%).

Most respondents reported using tribal traditions (85.7%), local environment (80.0%), and special community or regional events (82.9%) as Native-related resources for teaching and learning. Other resources included Native authors, culture/language specialists, tutors and liaisons from various tribes, culture and language departments, books, magazines, newspapers, traditional skills (carving, skin sewing, beading,

weaving), sign language, story telling, field trips, as well as teacher-developed culturally relevant curriculum, videos, and language tapes.

In many cases, Native community members (parents, elders, others) were heavily involved with the CBE program. Such involvement included evaluating the program (50.5%), playing active roles in operating or delivering the program (66.7%), planning the activities (60.0%), playing active roles in supporting education in the home (53.3%), and designing and modifying the program (57.1%).

A significant proportion (35.7%) of the respondents reported that elders, parents, or community members with knowledge of Native culture and language were used several times through the school year as teaching resources. About one-fifth (22.4%) said that elders, parents, or community members were used daily.

Almost one-third (31.3%) of the respondents indicated that their CBE program included activities of Native spirituality—prayers, chants, ceremonies, and traditional stories—several times throughout the school year. In other cases, such activities occurred daily (22.2%), weekly (14.1%), or monthly (9.1%).

A predominant majority (85.3%) of the respondents reported that their CBE programs were locally developed. Only 14.7 percent implemented an externally developed program. The respondents were divided on the degree of ease or difficulty for other schools to implement their CBE program. About half (49.5%) said it would be "very difficult" or "somewhat difficult" for other schools to implement their program. However, the other half (50.5%) felt that it would be "somewhat easy" or "very easy."

Feasibility of Experimental Research

On the feasibility of conducting experimental research involving randomized assignment of individual students, about one-fifth of the respondents (18.4%) said that it was "very feasible" or "somewhat feasible" to participate in such a study. On the other hand, more than one-third (37.8%) said that it was "very infeasible" or "somewhat infeasible." The rest were not sure about the feasibility.

According to 36.9 percent of the respondents, it would be "very feasible" or "somewhat feasible" to randomly select students so that some are given the CBE program first and some are placed on a waiting list to receive the program at a later time. Almost half (43.8%) said that it would be "somewhat infeasible" or "very infeasible" to do so. The rest were not sure.

A sizeable proportion (28.1%) of the respondents indicated that parents in their community would be willing to have students randomly assigned to either a program list or a waiting list. According to 36.8 percent of the respondents, the parents would be unwilling to do so. The rest were not sure.

About 34.9 percent of the respondents indicated that it would be feasible for their school to participate in a study that compares students in classrooms receiving the CBE program to similar students in other classrooms not receiving the program. A quarter (25.0%) said that it would be infeasible to do so. The others were not sure.

According to 42 percent of the respondents, it would be feasible for their school or district to participate in a study that compares participants in their schoolwide CBE program to students in a nearby school with similar demographic characteristics but not using a CBE program. About 15 percent said that it would be infeasible to do so. The others were not sure.

Thus, the results of the national survey suggest that in a sizable number of the CBE programs, school administrators believe that random assignment of students to treatment and control conditions is feasible. In the opinion of school administrators, it is also likely that in cases where random assignment is not possible, arrangements can be made to identify matched comparison groups at the classroom or school level. From a technical standpoint, it would appear that experimental research can be conducted with CBE interventions in some settings and locations.

Most of these potential study sites appear to have other desired characteristics, including sufficient depth and duration of treatment, to warrant a rigorous investigation of their effects on student achievement. Specifically, these CBE programs offer language immersion or language instruction at least 45 minutes twice weekly, or at least 30 minutes daily during the school year. Sufficiently large sample sizes appear available at these sites to ensure an acceptable level of statistical power, particularly for grades three, five, and eight.

Practical and Technical Considerations

Several considerations are critical to ensuring the feasibility as well as validity of CBE research. Some of these considerations have to do with obstacles to conducting experimental research with CBE interventions. Others relate to study features that will strengthen the validity of the research.

First, it is important to note that the conditions conducive to the conduct of experimental research are reported by school or program administrators in a survey. Conditions that actually exist on the ground may differ to some degree from what is reported. For example, a majority of the CBE programs, including those identified as potential study sites, are schoolwide interventions. While randomized assignment is reported to be feasible or somewhat feasible at the potential study sites, doing so in a schoolwide CBE program would mean that half the students would not participate in the program. The extent to which this is feasible will need to be verified through on-site discussions with the stakeholders. Indeed, in follow-up discussions, the respondents at some of the potential study sites were far less enthusiastic about "depriving" their students of the benefit of CBE as a result of randomized assignment.

Second, in follow-up discussions with the potential study sites, we realized that a formidable obstacle to randomized field trials is the relatively widespread perception that CBE is in and of itself beneficial to Native students. Hence, school administrators are reluctant or unwilling to deprive students of the benefit of CBE interventions as a result of participating in experimental research. For the same reason, they are reluctant to select students for participation in CBE interventions on the basis of need, as determined by a cut-off criterion, which would have made it feasible to implement the regression discontinuity design (Tallmadge & Horst, 1976; Yap, 1980; Trochim, 1984).

Third, while the potential study sites reported high-fidelity implementation of their CBE programs, the extent to which each intervention has incorporated the six critical CBE elements identified in our literature review is largely unknown. We believe that the extent to which these elements are implemented will determine the extent to which the intervention is likely to lead to the desired outcomes, including improved academic achievement in core subject areas. It is therefore critical that only CBE programs that have incorporated these elements to a significant extent be included in CBE research.

Fourth, and perhaps most important from a technical standpoint, it is difficult to conduct experimental research with existing programs, particularly programs such as CBE interventions, which typically have been in existence for a considerable length of time. As a rule, where a CBE program exists, most, if not all, students receive program services. There are few, if any, nonparticipants. Even if stakeholders are prepared to accept randomized assignment, the "control" group would essentially consist of former program participants, compromising the purpose of randomization.

Fifth, it appears advantageous to strengthen existing CBE programs prior to testing their efficacy. There appear to be ample opportunities of refining existing programs that are still evolving. From a technical and logistical standpoint, a strengthened program may make it more feasible to conduct research using an experimental design. For example, refining existing CBE programs for experimental research will help ensure a higher level of construct validity vis-à-vis the six critical CBE elements. The strengthened program may be seen by the Native community as a new intervention—not an existing service that has been available to all students. Randomized assignment to treatment and control conditions may therefore become more palatable and feasible.

Table 1 provides a summary of design features that will strengthen the validity of CBE research.

Table 1
Design Features that Strengthen Validity of CBE Research

Validity	Design Features
Construct	• Refining existing CBE programs to incorporate critical elements • Rubrics to measure fidelity
Internal	• Randomized field trials • Matched comparison groups based on propensity scores • Longitudinal cohort analysis
External	• Multiple sites and multiple contexts • Meta-analysis of site-specific studies
Statistical	• Sufficiently large sample sizes • Substantial magnitude and duration of intervention • Valid and reliable measurement

Desired Features of CBE Research

Results of this preliminary study clearly show that CBE is not a unitary concept. It is an eclectic collection of treatments tailored to meet the needs of particular Native student populations in a local school context. Upon consultation with the potential study sites, it appears advantageous to conduct a series of efficacy studies using a combination of designs.

Randomized Controlled Trials

This is the strongest design for making causal inferences of treatment efficacy. We have initiated discussion with the project staff of a CBE reading curriculum project implemented in the state of Washington. The project, developed by the Indian education staff of the Washington Office of Superintendent of Public Instruction (OSPI), is currently used in some schools in the state. The reading materials are currently disseminated without any significant support of professional development. For the proposed research, we recommend increased professional development and technical assistance to further strengthen the intervention. In our discussion with the OSPI staff, it appears feasible to randomly assign the enhanced intervention to a sufficiently large number of experimental and control classrooms to carry out randomized field trials of the

intervention. We recommend the use of a minimum of 100 treatment classrooms and 100 control classrooms in Washington to carry out the randomized field trials.

A second CBE intervention that offers the opportunity of conducting a randomized experiment is Creating Sacred Places for Children, a comprehensive school reform process developed by the National Indian School Board Association (NISBA). Like the Washington OSPI project, we recommend first strengthening the intervention with professional development and technical assistance. The intervention can then be randomly assigned to a sufficient number of treatment and control schools to carry out randomized field trials. We recommend the use of a minimum of 100 treatment schools and 100 control schools in multiple states to carry out the randomized field trials.

Matched Comparison Groups

In our follow-up consultations with the potential study sites, most continued to indicate that the use of matched comparison groups is feasible for a study of their CBE programs. In particular, several CBE programs in Alaska, Arizona, and Hawaii have expressed interest in participating in such quasi-experimental research.

These programs represent variations of Native language immersion or language instruction interventions. All have indicated the feasibility of finding comparison students at schools that are not implementing CBE interventions. This design option can be further strengthened by using propensity scores (D'Agostino, 1998; Shadish et al., 2002; Hansen, 2004) to identify comparison students. Variables that may be used to identify comparison students include poverty status, gender, grade level, language proficiency, and initial reading achievement.

Longitudinal Cohort Analysis

Where longitudinal scale scores are available (e.g., when student achievement is measured by standardized tests), we recommend the use of a growth curve model to track academic achievement in reading and mathematics for multiple years. Reading achievement can be assessed by standardized tests already in use at some of the study sites, as well as curriculum-based measures (CBMs) in English and Native languages. Participating students can be tested in both languages and monitored for progress in each language relative to control students or matched comparison students. The cohort analysis can be part of a value-added assessment (Sanders & Horn, 1994; Webster & Mendro, 1997), taking into account the effects of schools, teachers, as well as socioeconomic status.

Meta-Analysis

Upon completion of the site-specific experimental and quasi-experimental studies, we propose the conduct of a meta-analysis (Cooper & Hedges, 1994) of the results from these studies to provide an overall measure of the efficacy of CBE interventions. We expect that such an analysis will address issues of effect sizes of various CBE treatments

in different contexts. Such findings will no doubt further increase the efficacy of CBE interventions and improve the education of Native students.

Measuring the Independent Variable

The independent variable—CBE interventions—is not a unitary construct. We have identified, for example, six critical elements of CBE:

- Recognition and use of heritage languages
- 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, practice, and demonstrate skills)
- Curriculum that is 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)
- Strong Native community participation (including parents, elders, and other community resources) in educating children and in the planning and operation of school activities
- Knowledge and use of social and political mores of the community

Typically, these critical elements have different emphases and different manifestations from one CBE program to another.

CBE Rubrics

We recommend the development and use of a set of CBE rubrics to measure the fidelity of the CBE interventions. The rubrics, to be based on the six critical elements of CBE, will consist of a numerical rating scale for assessing fidelity, a descriptor for each rating, and examples for each rating in various contexts.

The rubrics can be used for purposes of selecting study sites, as well as providing a measure of the fidelity of CBE implementation at the selected sites to help establish construct validity of the proposed research.

In addition, the magnitude, intensity, and duration of CBE treatment—the dosage issue—will be measured. This will include whether the intervention is schoolwide, attendance

and level of engagement by individual students, as well as length (e.g., in years) of participation.

Measuring the Dependent Variables

The ultimate dependent variables are improved academic achievement in reading and mathematics. However, at least some of the short- and long-term outcomes (e.g., Native language development, academic and career aspiration, self-esteem, school attendance and behavior) are intervening variables worthy of explicit attention and measurement.

While validity and reliability are of paramount importance in measuring the dependent and intervening variables, cultural congruence and sensitivity are of particular interest in the proposed research. We will therefore pay special attention to the issue of bias in measuring the desired outcomes of CBE interventions. Indeed, educators, especially those serving Native communities, are taking steps to ensure that instruments used to measure the academic achievement of Native students are free of cultural and linguistic bias.

Student achievement data can come from several sources, including tests administered by local schools or districts, statewide assessments, as well as national assessment activities (e.g., National Assessment of Educational Progress). In addition to data obtainable from existing sources, we propose the development and use of curriculum-based measures in both English and Native languages to assess student achievement in reading and mathematics.

Standardized Assessment

We learned from the national survey of CBE programs that standardized tests (e.g., SAT and CTBS) are widely used in such programs. It therefore appears feasible to use standardized tests as a measure of student academic achievement (e.g., in reading and mathematics). An advantage of using such tests is the availability of scale scores that can be used to track achievement over multiple years to measure growth, as well as to indicate achievement status at any particular time. In addition, standardized tests typically have well-established reliability and validity.

State Assessment

State assessments typically provide data on student proficiency in core subject areas, including reading and mathematics, based on state content and performance standards. These data are publicly available in the aggregate and, with assurance of confidentiality, in various disaggregated forms, including individual students. Most of the state assessment systems also provide scale scores that can be used to track achievement growth over time, as well as to indicate achievement status (e.g., level of proficiency).

NAEP Data

With respect to national assessment, NAEP data are available for grades four, eight, and 12 in reading and mathematics. These data will allow comparisons of students participating in schoolwide CBE programs with their counterparts attending schools not offering such programs. While these data are generally not available at the individual student level, school-level comparisons can provide additional evidence regarding the efficacy of CBE interventions.

Curriculum-Based Measures

In addition to the existing assessment systems, we propose the development and use of a set of curriculum-based measures (CBMs) to assess student academic achievement in reading and mathematics. Curriculum-based measures are increasingly used as valid and reliable measures of academic achievement (Deno, 2003; Hosp & Hosp, 2003; Fuchs, 2004). For example, the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) is widely used in the evaluation of reading programs funded by the U.S. Department of Education, including Reading Excellence Act and Reading First programs. At two of the potential study sites in Arizona and Hawaii, efforts are underway to develop CBMs in English and in Native languages for reading and mathematics. For the proposed research, CBMs can be created for various grade levels covered by the study sites.

Site Selection and Recruitment

The selection of appropriate sites is critical to the success of the study. Thus far, we have identified several potential study sites based on the following criteria. We propose the continued use of these criteria to identify and select additional sites for the proposed research.

First, potential sites should be those that have implemented at least some of the critical elements of CBE. We recommend a visit to each candidate site to conduct an on-the-ground assessment of the extent to which the CBE program has incorporated the critical elements and the extent to which experimental or quasi-experimental research appears feasible with the intervention.

Second, as a set, the potential sites should represent the dominant program types. These include those for which language immersion is the driving intervention and those in which language instruction is of varying intensities, with cultural, curricular, or community involvement activities as the driving variables. Other program types may emerge in the site selection and recruitment process.

Third, the selected sites should cover a range of geographical regions and different contexts for experimental or quasi-experimental research. Where they are feasible, randomized controlled trials will be conducted. When randomized assignment is not

feasible, we recommend using the matched comparison group design to conduct the research.

Fourth, we learned from the national survey that to make experimental research feasible at CBE sites, community involvement is critical. Not only would the research need support and approval from various community agencies, its design and implementation would also require extensive input from stakeholders. Of particular importance is support and buy-in from tribal councils, school boards, and parents, as well as such national organizations as the National Indian Education Association, the National Indian School Board Association, and the National Congress of American Indians. For these reasons, Native community cooperation and support are absolutely necessary.

Concluding Remarks

We have proposed a combination of designs to carry out CBE research following an on-the-ground assessment and further discussions with an initial set of potential study sites. As we have discussed, there are various obstacles to conducting experimental research with existing CBE interventions, not the least of which is a relatively widespread perception that such interventions are in and of themselves beneficial to Native students. Randomized experiments will deprive half of the students of a benefit that has heretofore been available to them. Where such a belief is deeply held, the matched comparison group design appears to be a feasible alternative. On the other hand, there are cases where the CBE intervention is less established or in need of enhancement. They offer us an opportunity of strengthening a still evolving program and rendering it a more coherent and promising intervention. In such cases, we have recommended refining and strengthening the program as a part of the proposed research. We believe there are two distinct advantages in this approach. First, in enhancing the intervention, we can increase its construct validity vis-à-vis the critical CBE elements identified in our literature review. Second, from a feasibility standpoint, a new and improved program makes it more palatable for the Native community to accept randomized assignment to treatment and control conditions.

Two other issues arise from this approach, however. First, enhancing CBE interventions as part of the research agenda will substantially increase the cost of the project. Professional development and technical assistance are time-consuming and expensive endeavors. We believe, however, that to conduct a fair test of the efficacy of CBE requires such an approach and that the benefits will outweigh the costs. Second, while we are able to identify potential study sites, the recruitment and selection of control or comparison sites will no doubt be a significant challenge. Securing support and cooperation of Native communities at the participating sites may in some cases require an incentive, including financial support to participate in the proposed research.

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Preliminary Study for Experimental Research on Culturally Based Education for American Indian/Alaska Native Students

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RESEARCH SYMPOSIUM

Institute of Education Sciences
U.S. Department of Education
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A Preliminary Study for Experimental Research on Culturally Based Education for American Indian/Alaska Native Students

RESEARCH SYMPOSIUM

Institute of Education Sciences
U.S. Department of Education
Washington, D.C.
May 10, 2005

Under a task order contract with the Institute of Education Sciences, a study team at the Northwest Regional Educational Laboratory (NWREL) conducted a critical review of the literature on culturally based education interventions, assessed the feasibility of conducting experimental research with such interventions, and developed a study design for conducting experimental research. The research symposium was convened to share and discuss results of the literature review, the feasibility study, and the experimental study report with prominent researchers, experts on Indian education, and selected staff from the U.S. Department of Education. Participants were identified and invited jointly by the NWREL study team and IES staff to attend the symposium. The symposium agenda and a listing of participants are provided in Appendices A and B, respectively. The sections to follow provide a description of key symposium activities and a summary of participant comments.

Morning Session

Following a round of introductions, Phoebe Cottingham, Commissioner for the National Center for Evaluation and Regional Assistance, provided an overview of the IES mission to achieve increased coherence and higher quality in educational research. She indicated that the symposium was to bring in some fresh eyes to review the work conducted by the NWREL team on the feasibility and design of experimental research on culturally based education (CBE). The participants brought together both evaluation expertise and content experts from universities and the Office of Indian Education. With respect to methodology, there may be more than just randomized controlled trials (RCTs) to consider. We want to look at all options for conducting the evaluation, including mixed methods. With limited resources we need to address research questions of interest to educators and community members, not just researchers.

Victoria Vasques, Director of the Office of Indian Education, also welcomed the group. She said that our job is to continue implementing NCLB through Indian Education, with the goal of improving the academic performance of all Indian populations (Native American, Alaska Native, and Native Hawaiian) and closing the achievement gap. This work is based on an Executive Order for Indian Education signed by President Clinton and renewed by President George W. Bush in which language was added about

implementing NCLB irrespective of culture, language, and traditions. We need to look at CBE as a way to close the achievement gap. The research and evaluation effort is a major component of the Executive Order.

In his introductory remarks, Ray Valdivieso, IES Project Officer, indicated that both executive orders, as well as the advisory panels to both Presidents Clinton and Bush, stressed the importance of CBE. IES is working in a partnership with the Office of Indian Education to strengthen the research on Indian education. Work conducted by the NWREL team under this task order is a part of the larger research agenda. We want to use the most rigorous methods to answer the question of causal influence of CBE on student achievement. He reviewed key components of the task order, including literature review, review and survey of CBE programs, the feasibility study, and the proposed experimental design.

Kim Yap, project director from NWREL, reviewed the symposium agenda and the symposium commenced with a review and discussion of the literature review.

Literature Review

William Demmert, a professor at Western Washington University and a member of the study team, provided a presentation on the literature review. The review began with more than 10,000 documents and ended with 120 research documents selected for a closer review. This yielded a small number of experimental or quasi-experimental studies: only four true experimental studies were found, along with two quasi-experimental studies. Additionally, eight non-experimental studies that support some of the findings of the other studies were identified. The synthesis identified three working theories (cultural compatibility theory, cognitive theory, and cultural history activity theory or CHAT) to explain how CBE can have a positive impact on student learning and other outcomes. The literature also pointed to six critical elements of CBE that are discussed in the review. There were assertions about the centrality of Native culture and language in shaping life and academic experiences of Native students, but there was little experimental evidence to directly support these assertions.

Review of CBE Programs

David Beaulieu, a professor at Arizona State University and a member of the study team, discussed his extensive review of existing CBE programs. He made the distinction between CBE as a whole-school approach and CBE interventions involving the teaching of Native language and culture. The CBE programs included those from the Indian Education Act, Administration for Native Americans (ANA) Native language programs, and other grants funded by the U.S. Department of Education. Five types of CBE were identified from this review: culturally-based instruction, Native language instruction, Native studies, Native cultural enrichment, and culturally relevant materials.

Survey of CBE Programs

Kim Yap presented the results of a national survey of 207 programs in 24 states. A total of 105 CBE programs completed a questionnaire (51 percent). About 18 percent felt that randomized assignment of students to treatment and control conditions was possible, while about 37 percent thought randomization was feasible under condition of a waiting list. The results were based on responses from school and program administrators. Additionally, 35 percent thought comparison of classrooms was feasible. Another 42 percent thought comparison of schools was feasible. Thus, randomization of schools was perceived to be more feasible than randomization of students. This is consistent with the fact that a majority of CBE programs are schoolwide programs.

Survey respondents commented on the importance of involving the Native community, not just in endorsing randomized experiments but in having a say in how they may be conducted in a way that benefits the students and the community. There is a perception that CBE is inherently a good thing, so it may be difficult to deny CBE to one group as a condition of an experiment. The study team visited potential study sites to explain what is meant by random assignment. When RCT was explained, there were some reservations and a sense that it will be challenging to do this in many communities.

Some of the potential obstacles to conducting experimental research are as follows:

- Perception that CBE in and of itself is beneficial. So why do we need to do an experiment?
- Construct validity—the extent to which interventions have incorporated CBE elements is largely unknown and probably needs to be measured.
- Difficulty in conducting experimental research with existing programs. They are schoolwide, so selection of students within schools is not feasible; the school as the unit of analysis poses difficulties (such as sample size).

Proposed Study Designs

Kim Yap discussed four design options:

- Randomized controlled trials (RCTs) appear feasible for two interventions (Sacred Places and the Northwest Native American Reading Curriculum).
- Matched comparison group design—a quasi-experimental design (QED)—appears feasible for another six CBE interventions.
- Both RCTs and QED should include longitudinal cohort analysis over three years.
- A meta-analysis may be conducted to assess overall effect size.

The Northwest reading curriculum was developed by the Washington Office of Superintendent of Public Instruction and Evergreen College. This program and Sacred Places, developed by the National Indian School Board Association, can be implemented in a large number of schools (Sacred Places) or classrooms (Northwest reading curriculum) in multiple states.

Participant Comments

Following the three formal presentations, participants provided the following comments:

CBE intervention as we define it (the six-component model) is not a simple thing to measure in an experimental or any kind of study. The definition requires some measures of teacher-student and student-student interactions, which are very labor intensive. You need to measure the kinds of discourse that go on in classrooms and the home because this is an important part of CBE. There is an issue of depth versus breadth. You don't just want to capture generic instruction, but you would want to do some time-intensive classroom observations around the elements of CBE.

The Barbara Foorman study on reading instruction and the instruments she has developed can perhaps be adapted. It is no simple task to measure CBE. We can develop a rubric of the six essential features and create an ordinal scale. The six dimensions are not independent, so the rubric can probably be reduced to four elements. There is a published rubric on pedagogy and teacher-student interaction with good psychometric qualities.

The six principles are not decomposable. For this to work, you need a comprehensive approach. But some of these dimensions are known and perhaps the research should focus on those that are less well understood.

Expert Critique

Lee Sechrest of the University of Arizona provided a critique of the proposed experimental research.

He suggested that we need to be clear about the questions and audience we really need to focus on for this research. Does the "equipoise" justify a randomized controlled trial (RCT)? (Equipoise is a term used in medical research to reflect the degree of uncertainty about a treatment; an RCT is only justified if there is sufficient uncertainty by key stakeholders.)

Is an RCT what we need? There is confusion around the real research question. The literature review seems to confirm a widespread belief that CBE works. From the community's point of view, the question is answered. They are not in a state of equipoise. Or, is the correct question about what form of CBE works? But there are other audiences, including the practitioners and other researchers. In any case, it is important to ask who the audience is. Who must be persuaded?

"Preference trials" from the medical field may be one approach to think about. Patients are given good information about two treatment options and are then asked to choose one. Those who cannot make up their mind (usually about half) are assigned randomly to one of the treatments. Can we apply this in communities with CBE interventions?

Another thing to consider: What if the effect size were zero on achievement? Is CBE still worthwhile because it has other benefits (self-esteem, community goals)? Should CBE be shown to be *as* effective as other approaches (rather than *more* effective) given that it has other benefits?

We need to consider the strength of the treatment (CBE as an independent variable). We need to parse the causes through careful observations in the classroom so we really understand the nature and strength of the intervention. We also need broad measures of the outcomes.

RCT as an option has serious limitations. In the medical field, it is difficult to carry out over a long period of time. Attrition is always a threat: the study you end up with in the end is not always the good, randomized experiment you started with. "Poor research is very expensive."

RCT is not the only answer. Good theory is important, it can compensate for a lot of methodological weaknesses. The literature review does not incorporate a lot of the more basic research on the basic science of cognitive development, language development, feelings of worth in the community, motivation, and so on. We can learn a lot from other kinds of research (e.g., "shoe leather" designs, or just examining what is going on) and from theory and basic research.

Participant Comments

Sacred Places reads a lot like the effective schools research. How is CBE different from generic good practice? In an effective school, it is really difficult to understand all that is going on and what works and why. It is difficult to export that somewhere else. There is evidence on the effects of CBE on things like discourse, but not much on outcomes. There may be changes in interaction patterns between students and teachers, but what is the effect on student outcomes? The research needs to look at both questions.

The research might address the contribution of using native language. What is different about CBE? What is different about the Washington reading curriculum from other Native curricular approaches? What is the value added to this approach? Further, you need to document the overall context of these CBE approaches to figure out what is going on.

While some participants argued for a research design that would "tease out" or parse out the unique contribution of CBE over other "good practice" such as effective schools variables, others maintained that we cannot expect CBE to have achievement effects in the absence of a larger program of good academic practice. We need a fair test of CBE, that is, a study of its efficacy under ideal conditions (e.g., good academic program, stable students and school staff). This is not the same as evaluating "effectiveness" or how CBE programs fare as they occur under many conditions in the field.

Perhaps we should not view CBE as a model to be evaluated (like a comprehensive school reform model), but as a set of principles that are adapted to local conditions. A rubric that represents these principles makes sense, but even so the principles will be highly localized to a specific community. However, the use of native language is a key feature; the aspects of language need to be pulled out and looked at carefully in the research. A large part of the research should focus on the language component.

Afternoon Session

Expert Critique

Gary Ritter of the University of Arkansas talked about the goals of experimental research as developing the most credible evidence of effectiveness for programs that can be replicated. It should focus on outcomes that are important and universal. A key question is whether some of these CBE approaches are replicable. If not, it is not worth conducting an experimental evaluation.

Some previous experiments and quasi-experiments on CBE used different input and outcome measures than what we are interested in. One intervention (KEEP) had a large effect size (2.0). If we are confident that it is due to the program and not teacher effects, this is one worth looking at more closely. Overall, the literature review gives us hints but no strong evidence.

We don't really know if CBE works, except through observation and personal belief. Good things are happening with CBE, but are the things that we want to see happen (large achievement gains) happening? Is CBE the cause? We don't know without experimental research. CBE may have many benefits, but we want to know if it produces a strong academic benefit.

Are we at equipoise? Yes, and it is not just the scientific researchers who are uncertain. The U.S. Department of Education (USED) is interested in the answer and the communities are interested in knowing if CBE improves academic achievement, other benefits aside.

The feasibility study may have some selection bias. Most (85 percent) of the CBE programs are implemented in schools with a majority of Native American students. Are there many schools out there without CBE? These provide opportunities to implement CBE in a controlled experiment. We asked practitioners about the feasibility of experimental and matched comparison group studies, but they may not have understood the implications. There was some backing off during the site visits once they understood what is involved.

We need to find programs with evidence of minimizing the achievement gap. Studies should include common outcome variables, possibility for replication, and allow for meta-analysis. We should focus on random assignment. We can do random assignment

when there is choice or a waiting list. If the intervention is schoolwide, we would want to sample schools as the unit of analysis. The community involvement piece, because it is so localized, may not be replicable.

The study should focus on randomized experiments with the two programs (Washington program and Sacred Places). The six interventions for quasi-experimental research may not be the best place to put emphasis. A school-level analysis would require a large number of schools.

Another strategy is to work with schools wanting to develop CBE and provide technical assistance to them around the six principles. We can put people on a waiting list, select randomly, and promise the others a delayed implementation. We can also include slightly different implementations of CBE in different sites and look at the effect of the variations. Offering a technical assistance package would increase the attractiveness. This helps develop the local support you will need to do experimental research.

There are ways of addressing the challenges. For the challenge, "we know CBE is good," the answer is that it can be better if designed to address the achievement gap. For the challenge, "why should we experiment?" CBE may go by the wayside if it is not proven to close the achievement gap because of NCLB. To the issue, "why should my school do it?" we can offer technical assistance with the research. On the concern that "we can't measure our programs with test scores," we can point out that achievement gaps are a policy priority and they are measured by test scores—test scores matter.

Participant Comments

One participant shared her perspective from a grassroots, teacher training perspective and as the director of a language immersion program. She indicated that many visitors come to her program to learn about the components so they can take them back to develop their own CBE program. From a practitioner's perspective we would like to see more substantial CBE study, more understanding of the components and how they work. CBE is very holistic. It is based on a legacy model of the school and community. We study and celebrate strengths that have allowed us to be resilient. Being successful in meeting NCLB requirements is the end the community has in mind, but there are also other outcomes.

The participant offered four "Rs" on how we should conduct a study of CBE:

- Relationships—outsiders offering technical assistance need to have a relationship with the community.
- Respect for each other's expertise (researchers, practitioners, community members).
- Reciprocity—who does the study serve? This must be negotiated among stakeholders.
- Rigor of the research.

We need to understand the components of CBE and the rubrics would be very helpful, something that other Native American communities can use. The research needs to give us tools and knowledge (like the rubrics) that other communities can use.

Participants commented on the effects of CBE, including school success and postsecondary success. We know some schools are not successful with Indian populations; some are failing. We know of a small number of schools and districts that do well. To bring them into an experimental design, you need to change the culture of the community, stabilize the students and teachers (high mobility in many schools). There are many factors that contribute to the success of exemplary programs.

There is a need to conduct research of exemplary sites and compare them with matched schools. Do the exemplary schools do better on outcomes? We can study the schools qualitatively to find out what is going on, then determine which principles are generalizable. For instance, what kinds of teacher-student-community interactions distinguish the exemplary schools?

In the scope of work the study team was asked to determine what we can do with RCTs. We talked about a purpose-built intervention, but it is more than offering a little bit of technical assistance to help schools implement CBE as part of an experiment. It would require very deep professional development. It would probably take at least two years to get teachers to understand and implement CBE with some fidelity.

We need good systematic studies of CBE approaches in terms of language development, English acquisition, and reading achievement.

We need to learn more from the exemplary sites before launching into experimental studies. We need to look at the exemplary sites and determine if they are effective and how they are effective. We need more teasing out of the achievement data to validate the six principles. Are they present in the exemplary sites? Are they implemented? This may require two years before you launch into RCTs. This would be the first phase. In a second phase, you would have schools without CBE, schools that have "traditional" CBE (not the cream-of-the-crop sites), and a third sample of schools that have an enhanced CBE through intervention and based on what we know from the most exemplary sites. And then, finally, a third phase is RCTs if the earlier results are promising, which might not come until year 5.

The model programs we identified are in one tribal area. How does this replicate to schools with multiple tribes? There is a problem for replication. A third of our students are in rural areas (where these programs tend to reside), but what about the one-third in urban and one-third in suburban areas that are in large school systems with multiple tribes?

Large-scale RCTs may not be the best strategy at this time. Gearing up to do these intervention studies would be very difficult and expensive. A comparison group design may be the best possibility. You should be encouraged that you know there are some

really good programs, because they are probably robust programs (large effect sizes) that can withstand methodological error.

"As if" randomization is another possibility—comparison groups with different levels of the intervention. We should probably try to do more with non-randomized studies.

Final Observations From Participants

There is very high interest in CBE in the Indian communities throughout the country. They want to know, how can I do this? The bottom line is that we want to know that it works. The audience here is the U.S. Department of Education. The interest came top-down through an executive order but also bottom-up from Indian tribes, practitioners, and community members. A lot of other schools want to know what works in these programs, what happens, and what can be transferred to other communities. The CBE communities are part of the audience also.

Another need is appropriate tools to measure student progress in Indian communities because what we have is inadequate.

At some level you could do some random assignment, but that should not be all you do. We need more intensive, indepth study of the successful programs (with comparisons) and then pull out the components you can test experimentally. The National Institutes of Health (NIH) would be interested in studies of linguistic development and English acquisition.

The research should start by focusing on exemplary programs and the inner workings.

There are both short-term and long-term outcomes of CBE. We need to understand the mediating and moderating variables to understand the effects on achievement. And there are lots of measurement issues. How do we measure native language development? How do we measure sense of community? We need a lot of work on the proximate outcome variables.

In developing the research model, we need to infuse community partnering strategies.

The perfect can be the enemy of the good. There are good replicable components of CBE; we need to study those that are effective and replicable

CBE is a critical question in Native American education. Communities want programs that are meaningful and effective. Effectiveness should be measured as student success in life. It is more than just reading scores. Indian people are listening. The research needs to be done very well and thoughtfully.

Appendix A

AGENDA

8:30 a.m.	Continental Breakfast	
9:00 a.m.	Welcome	Phoebe Cottingham Victoria Vasques
9:15 a.m.	Introductions	Kim Yap
9:30 a.m.	Background & Overview	Ray Valdivieso
9:45 a.m.	Literature Review	William Demmert
10:00 a.m.	Review of CBE Programs	David Beaulieu
10:15 a.m.	Survey of CBE Programs	Kim Yap
10:30 a.m.	BREAK	
10:45 a.m.	Research Design	Kim Yap
11:00 a.m.	Critique/Comments	Lee Sechrest
11:15 a.m.	Group Discussion on Critique/Comments	All Participants
12:15 p.m.	LUNCH	
1:30 p.m.	Critique/Comments	Gary Ritter
1:45 p.m.	Group Discussion on Critique/Comments	All Participants
2:45 p.m.	Summary/Wrap-Up	Kim Yap/Jim Kushman
3:00 p.m.	Adjourn	

Appendix B

Symposium Participants

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The Centrality of Practice to Evaluation

Forum

Forum contributions present essays, opinions, and professional judgments. Forum articles speak to and about the philosophical, ethical, and practical dilemmas of our profession. By design, the "Forum" is open to diverse views, in the hope that such diversity will enhance professional dialogue. Standard citations and reference lists should be used to acknowledge and identify earlier contributions and viewpoints. Manuscripts should typically not exceed 15 double-spaced typewritten pages in length, unless the paper is invited by the editor.

The Centrality of Practice to Evaluation

Thomas A. Schwandt
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Abstract: There is a strong tendency for evidence-based approaches to social practices to view these practices as imperfect devices for delivering social services. Practices are regarded as in need of repair by evaluation (and research) that can deliver the necessary science-based solution to the problems of practice. This article presents a different view of practices as material and linguistic events in which activities and relationships are constituted and unfold in interaction and in which people change and develop, and it argues for restoring this view of practice to evaluation. The article discusses two different ways in which notions of *evidence based*, *practice*, and *evaluation* are related and suggests what a genuinely practice-oriented approach to evaluation entails.

Keywords: *practice; evidence based; science based; practical knowledge*

In a workshop conducted at the 11th annual European social services conference in Venice in July 2003, Professor Jan-Håkan Hansson, a program director at the Swedish National Board of Health and Welfare, delivered a paper with the title "Promoting Evidence Based Practice in Social Services and Health Care" (Hansson, 2003). In that paper, Professor Hansson posed four rhetorical questions:

- Is it not reasonable that as a *client, user, or customer* of social and health services you should know more about the outcomes or effects of proposed help and activities that you are offered?
- Is it not reasonable that as *citizens and taxpayers* we should know more about the quality and effectiveness of the collective resources that we put into welfare services in social and health care?

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- Is it not reasonable that as *a professional* you should know more about the outcome and effects of different methods that you use in your day-to-day work?
- Is it not reasonable that *we all* would like to know more about what actually works in the different areas of educational, health care, and social service practices?

Professor Hansson concluded that the self-evident answer to these questions is, "Yes, of course it is reasonable." I agree. How could anyone possibly deny that having evidence-based knowledge of effective interventions in education, health care, and social work services is irrelevant to the interests of the citizen, the practitioner, or the user of those services? Moreover, it seems that a good part of what it means for us to go along together as citizens, friends, colleagues, and the like depends on our appeals to evidence. In other words, evidence matters to us on many occasions in everyday life. Just ask the teenager who repeatedly denies to her mother that she smokes yet exhibits the telltale brown stains of nicotine between the index and ring finger of her right hand. I doubt that any of us would go to a doctor who forgoes medical tests and a clinical examination and tells us it feels like it to him that we are sick. My graduate student wants to see the evidence for my judgment that the paper he just submitted does not make much sense. Thus the idea that several kinds of human judgments ought to be based in evidence does not seem all that unreasonable.

But undeniably there is a kind of evidence-based mania about all forms of social services and educational practices gripping Western democracies these days. This is more than the reasonable concern that the judgments of teachers, social workers, health care providers, and public administrators should take evidence into account and reflect a good argument for the decisions taken. It stems from a very narrow interpretation of what evidence-based practice means that is supported by other popular discourses associated with the ideology of neoliberal governmentality and the New Public Management (NPM) including outcomes assessment, performance measurement, continuous quality improvement, best practices, and the standardization and manualization of assessments and interventions.

I support the idea that evidence matters to practice. Yet I want to reverse the priority in which we consider the evidence-practice relationship: Rather than first thinking about evidence and then focusing on practice, I suggest we first focus on practice and then think about evidence. To make this shift in thinking requires that we consider two ways in which the ideas *evidence based*, *practice*, and *evaluation* are related.

Two Views of "Evidence Based"

The term *evidence-based* (or *science-based*) *practice* can convey two very different ideas (Mullen, 2002). On a rather narrow definition, it means any practice that has been established as effective through scientific research according to some set of explicit criteria. For example, in 1998, a consensus panel at the Robert Wood Johnson Foundation in the United States identified six evidence-based practices for the treatment of persons with severe mental illness. They based their choice on four selection criteria:

- That the treatment (practice) in question had been standardized through manuals and guidelines.
- That the outcomes of the treatment were evaluated with controlled research designs.
- That objective measures were used to document treatment outcomes.
- That several research studies on the treatment were conducted by multiple, independent scientists.

Similar criteria are now in place for deciding what kinds of interventions in health care, social services, and education qualify as evidence-based practices. Some examples of agencies

employing this way of thinking include, in the United States, the What Works Clearinghouse in the federal Institute for Educational Sciences, and the federal Agency for Health Care Research and Quality evidence-based practice centers; in the United Kingdom, the Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre) based in the Social Science Research Unit in the University of London's Institute for Education, and the Cochrane Effective Practice and Organization of Care Group at the University of Aberdeen; and the Nordic Campbell Centre started in Copenhagen in 2002 at the Danish National Institute of Social Research with support of the Danish Ministry of Social Affairs and the Danish National Institute of Social Research.

However, this is not the only way to understand the idea of evidence based. A broader definition, and one that originates in the field of clinical medicine where the idea of evidence-based practice was first introduced, holds that evidence-based decision making means "the conscientious, explicit and judicious use of current best evidence in making health care decisions" (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996, p. 71) and the "integration of best research evidence with clinical expertise and patient values" (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000, p. 1). Notice here the specific emphasis on the importance of integrating evidence with clinical judgment and with taking into account what the client (in this case, patient) considers valuable.

Two Views of Practice

These two ways of thinking about the meaning of the term *evidence based* are associated with two different views of practice. In each way of thinking, the idea of *practice* is central but in very different ways. The narrower definition of *evidence based* at least implies the following:

- That social and educational practices are currently not very sound and in need of reform.
- The engine of reform is the establishment of a scientific knowledge base of what works that in turn must be effectively disseminated to and applied in various practices.
- Scientific knowledge is (or should be) authoritative for practice. Practice stands in a subsidiary relationship to scientific knowledge.
- Practice is the site or location for the delivery of scientifically valid solutions (remedies, if you will) to educational, social, administrative, and health care problems.

Embedded in this view of practice is a pervasive notion of instrumental rationality. Practice itself is regarded as an instrument, both an object and a means. Moreover, there is at least an implicit skepticism regarding any practice that cannot justify itself as a worthwhile social undertaking in terms of scientific rationality, technical expertise, and effectiveness. More obvious, perhaps, is the notion that scientific knowledge stands in an instrumental relation to practice—practice can be repaired, improved, and so on by the application of the right kind of knowledge. As Weber pointed out long ago, these ideas express the tendency in modern capitalist societies (reinforced in current notions of NPM) to rationalize practices of all kinds. One example is the effort currently under way in Sweden to develop a new infrastructure of linkages between social work practices, university education in social work, and the so-called hidden university of R&D centers doing research on practice. At least as I understand it, this is a significant effort to enhance the scientific expertise of social workers and to create an evaluative society within social service administration, and it can be read, in the words of one commentator as a "vast scientification of social work in Sweden" (Denvall, 2003).

A broader definition of *evidence based* suggests that practice is more than a site or context for the application of scientific knowledge. It is compatible with the view that practice is a very

complex affair involving the practitioner together with the student, employee, client, patient, or service user in a joint decision-making process that involves simultaneous consideration of evidence, professional values, political considerations, and individualized goals (Sanderson, 2003). Knowledge in the form of instrumental evidence of "what works" surely is important. However, it is in the everyday encounters with specific patients, students, employees, and clients that the practitioner must decide how and when to draw on such knowledge in combination with his or her understandings of client needs; institutional and personal resources and constraints; and a sense of what it means to be a good teacher, social worker, nurse, manager, and so forth on the occasion in question.

Practice on this view is, of course, local, contingent, and contextual. Yet practice is far more than a specific context. Regarding practice primarily as a matter of the local and situational goes hand in hand with the view that the kinds of scientific knowledge that are provided to practice must somehow be adjusted or adapted to fit circumstances. No doubt this is true, but it misses the point of what this broader definition of practice means. Practice, as understood here, is a particular kind of human engagement that involves one's dealings with, or interactions with, others that unfold in view of some particular understanding of substantive rationality appropriate to the practice in question. Substantive rationality (in contrast to technical or instrumental rationality) is concerned with outcomes that are appraised in terms of human objectives far wider than effectiveness, efficiency, goal attainment, and so on. Those objectives are entailed in answers to questions about what goods a practice aims to realize, what it means to be a good practitioner, and so on.

Practice requires participant (rather than spectator) knowledge, and this appears in two different forms of practical knowledge (Saugstad, 2002): (a) craft knowledge or coping skill in relation to one's practice, for example, performing the physical acts of care demanded in nursing, a physician's ability to take a medical history, a social worker's skill in conducting an interview, an occupational therapist's aptitude in conducting a test of functionality with a client, and so on, and (b) wise judgment that requires an ability to discern the salient particulars of a situation (to size up the situation) and to understand what general knowledge, principles, and values are involved in deciding what to do on a particular occasion. For example, when as a teacher I aim to motivate my students in class today, do I start with the students' own previous experience or arouse their curiosity by presenting the students with something new and different? Answering this question demands wise judgment. Practice in this view demands a dialectic process of working back and forth from the case at hand to established knowledge, values, and commitments. This way of reasoning is hermeneutic—it signals that what is involved here is an interpretation of the situation based on understanding or grasping the relevant features of the case at hand in concert with values, principles, and standing commitments, such that one is able to see an appropriate and effective way of acting (Schwandt, 2002, 2004).

Two Views of Evaluation

These two different views of what evidence-based practice means are associated with two different understandings of the nature and role of *evaluation*. In the narrower view, evaluators are applied social scientists who use their considerable methodological skills to determine whether a practice intervention "works." They address given ends or goals—to reduce recidivism rates among criminals, to increase reading test scores, to treat clinical depression, to eliminate addiction. The evaluator's task is to evaluate the relative effectiveness of different treatments or interventions to achieve those ends. These evaluators might use theory-based

evaluation approaches aiming to pin down underlying causal mechanisms in various kinds of interventions, or they might design experimental studies, using random assignment to treatment and control conditions to evaluate causal hypotheses about treatment effectiveness. Where randomized trials are impossible to use because of ethical and logistical constraints, they might employ comparison group designs and use sophisticated statistical modeling techniques. Their job is to provide scientifically valid information of what works that can then be disseminated and applied to practice. Their relation to practice is as outsiders delivering knowledge to practice.

On the broader view, evaluation is less an applied social science and more like a pedagogy in which the evaluator helps practitioners understand the kinds of evaluative decisions they face and enhance their ability to deliberate well. Patton (1997) referred to this as the process use of evaluation—the impact of the evaluation comes not just from the 'findings' of an evaluation but also from the very act of people engaging one another in a process of thinking evaluatively (i.e., knowing how to use information, weigh evidence, consider contradictions and inconsistencies in reasoning, articulate values, examine assumptions, and so on). But evaluation in this way of thinking is more than this process use, and I will shortly explain why.

It is this second view of evaluation that I have been talking and writing about for many years. I do not object to the idea of generating evaluation knowledge of "what works"—that is, to conducting theory-based or experimental studies of how and why a particular social intervention or program achieves its intended effects. This kind of scientific evidence can be helpful to practitioners. What I worry about is that science-based or evidence-based approaches to practice are too readily becoming an ideology that aims to instill scientific rationality as authoritative for everyday practice, that threatens to eclipse practical knowledge and reasoning, and that comes dangerously close to regarding the practitioner as a judgmental dunce, who if left to his or her own way of doing things will inevitably be inefficient, ineffective, and squander precious social resources. We are at risk in believing in a false dichotomy: that the only legitimate knowledge for practice is scientific, for all else is unreliable intuition, habit, custom, or mere belief. We are in danger of accepting without reservation the myth of a scientifically guided society, a society in which science (not everyday life) occupies center stage. In this kind of society,

> social problem solving, social betterment, or guided social change (regarded as roughly synonymous) call above all for scientific observation of human behavior such that ideally humankind discovers the requisites of good people in a good society and, short of the ideal, uses the results of scientific observation to move in the right direction. (Lindbloom, 1990, p. 214)

In this way of thinking, the dilemmas we encounter in teaching, in providing social services or health care, in managing and administration, and the like are not viewed as real human predicaments to be lived and to be addressed in living but largely as technical problems that have scientific (i.e., evidence-based) solutions. Our everyday practice as teachers, managers, social service workers, and health care providers tells us that no escape from these dilemmas can be found. We are, as I have argued elsewhere, always on the "rough ground" where values, personalities, evidence, information, feelings, sensitivities, emotions, affect, ambiguities, contradictions, inconsistencies, and so forth are simultaneously in play as we try to do the right thing and do it well. Science-based or evidence-based thinking tends to view this messy world of concrete human dilemmas as an embarrassment, for it "aspires to more objective indicators of the existence of [and solution to] problems that can be stripped of sentiments, feelings, or emotions" (Lindbloom, 1990, p. 218).

Practice as Central to Evaluation

To restore practice to a central place in evaluation means focusing on practice not as an object that needs to be repaired by evidence or science but as a material and linguistic event in which human dilemmas emerge and are addressed. This means looking at practice in a different way and using the very idea of practice as a conceptual framework to open up new ways of seeing and analyzing in evaluation. Several features of what it means to look at practice in this different way include the following.

First, practice is not regarded as an object or thing-like entity or system but as an event (or series of many events) that is always developing, unfolding, and being accomplished. Hence, we are concerned primarily with activities and relationships, with the manners in which people change and develop, and the ways they continually interact with others. So, for example, instead of viewing practice using analytic tools such as barriers, utilization factors, outcomes, knowledge bases, outputs, underlying mechanisms, delivery systems, and treatments, we are more likely to be concerned with the ways in which habits, routines, rituals, customs, common meanings, and traditions are expressed in the language and behavior of a practice. For example, how are users of an occupational therapy service greeted when they arrive at the clinic? What diagnostic routines are followed and why? How do professional service providers speak about the people they serve? (Although these examples point to the practice of practitioners directly engaged in client service, the refocusing or repositioning of evaluation toward the lived experience of practice does not exclude any particular kind of practice. In other words, we could engage in a study of the practice of managing an occupational therapy service, for example, as well as the practice of occupational therapists.)

Second, in this way of looking at practice, we view practitioners in a complicated way. They are neither fully autonomous individuals acting at will, confronting each other with their decisions nor judgmental dopes conforming to social norms but agents who "carry" practices in their bodily and mental routines; they are agents who consist in the performance of practices (Reckwitz, 2002). Thus, they cannot be neatly explained as the self-interested figures in rational choice theory nor the norm-following and role-playing actors of sociological theory.

Thus, third, when we look to practice as an accomplishment, we focus our attention on directive and instructive forms of talk within a practice. We look at knowledge that is embodied in gestures, in confidence in acting, and in ways of addressing others. Much of practice is a matter of communication and dialogue in which we aim to "move" one another as Shotter (1996) explains,

> For example, we "point things out" to people ("Look at this!"); give them "commands;" "remind" them ("Think what happened last time"); "change their perspective" ("Look at it like this"); and so on. All these instructive forms of talk "direct" or "move" us, in practice, to do something we might not otherwise do: to relate ourselves to our circumstances in a different way, to look them over in a different manner. (pp. 388-389)

These efforts are simultaneously cognitive and emotive—conceptualizing and reflecting, feeling and reaction unfold together.

Fourth, although it is undeniable that scientific information can be valuable to practices of all kinds, the kind of knowledge we seek in improving practice is not fundamentally knowledge of fact or knowledge in the form of new theories or new models for practice, nor is it only craft knowledge. There is more to "knowing" in practice than knowing that or knowing how. Rather, practice changes as practitioners change their sensibilities and sensitivities, their ways of being toward a situation. In other words, practice changes as practitioners alter their practical rela-

tions to others around them. For example, consider my practice of teaching in higher education: That practice does not fundamentally change by my importing into my practice technologies like PowerPoint presentations or by lecturing less and dividing students into small self-guided discussion groups. To be sure, the *instruments* of my practice change in these circumstances, but the practice of teaching itself remains the same until I am able to see myself standing in a new way toward the students and subject matter. A change in practice depends on a change in the practitioner—on my ability, willingness, and dispositions as a teacher to develop new ways of perceiving the purpose of teaching and the goods it aims to realize; new forms of responsiveness and receptivity toward my students; and new forms of understanding myself, my students, and the subject matter.

Fifth, thus, the kind of knowing in practice that we are concerned with is an understanding that is always self-constitutive. What I mean here can best be seen by comparison. We commonly think of knowledge (either knowing how or knowing that) as something one acquires through learning and that one "has" and that can be then "applied" to some situation in a separate step. In other words, knowing, on one hand, and its application (doing), on the other hand, are a two-stage process. Knowing in practice is of a different kind. When we reach an understanding of what is appropriate and effective to do in practice (as my example of the teacher indicated)—in other words, when we *have* that knowledge—we take ourselves along, so to speak, in the activity. In other words, our entire "being"—our gestures, emotions, orientation, stance, and perspective, as well as our ways of understanding and questioning—and our knowing are closely related.

Sixth, in this way of viewing practice, we also think differently about learning in practice. Commonly, we think that practitioners learn by accumulating and internalizing the scientific knowledge generated for them by experts such as researchers and evaluators. Learning is a private matter—that is, it takes place within the mind of the individual knower—and it is accomplished by a transmission or transfer model of teaching in which knowledge is organized in an atomized, sequential, and hierarchical manner and conveyed to practitioners (Delandshere, 2002). Moreover, the kind of knowledge that is taught is regarded as generalizable—transferable from context to context. What one learns is largely utilitarian and instrumental in character; it is about learning to solve problems with one's practice via the use of general knowledge. So, for example, if the problem is one of which strategy for learning how to read is most effective (as measured by performance on some standardized measure), the researcher helps to solve the problem by designing a study that compares the relative efficacy of two reading treatments. The researcher's role is to give the information he or she acquires by scientific means to the practitioner so that the practitioner can fix the problem. The kind of learning going on here is about the practitioner acquiring knowledge as an instrument or tool that will make it possible to mend, better manage, or otherwise improve the practice in question.

In the view of practice that I am advocating here, learning and cognition are not solely situated in the mind of the individual learner but in the interaction of the individual with others and with the material circumstances of practice:

> A theory of social practice emphasizes the relational dependency of agent and world, activity, meaning, cognition, learning and knowing. . . . Learning, thinking, and knowing are relations among people in activity in, with, and arising from the socially and culturally structured world. . . . One way to think about learning is as the historical production, transformation, and change of persons. (Lave & Wenger, 1991, pp. 50-51)

There are several important ideas to note here:

- There is no knowledge apart from the active engagement or involvement of the knower with that which is to be known.
- Learning (or knowing) and application (and subsequent development of learners) are not separate processes. Lave (1996) has argued that common models of continuing professional education that separate learning and application are based on two questionable claims: These models assume that agents' (practitioners') relations to their activity (practice) "are static and do not change except when subject to special periods of 'learning' or 'development'" and that special institutional educational arrangements (e.g., workshops, professional development seminars, and courses) are the circumstances for "learning," separate from everyday practices of "doing" (p. 12). In other words, we too readily assume that "learning" is some activity that takes place on a special occasion when a practitioner is not busy "doing."
- The notion of transmitting or transferring knowledge (in the form of theory or some other prescriptions for practice) is questionable. It is dubious because it rests on the assumption of uniformity of knowledge and denies "the fundamental imprint of interested parties, multiple activities, and different goals and circumstances on what constitutes 'knowing' on any given occasion" (Lave, 1996, p. 13).

Seventh, knowing in practice is best characterized as "action, participation, and transformation of individuals within specific social and cultural contexts" (Delandshere, 2002, p. 1473). Therefore, the kind of learning and knowledge characteristic of practice is not merely a Deweyan pragmatic inquiry circuit—or a special kind of deliberative process—in which one moves from engagement with the case at hand, through some kind of detached contemplation and analysis, and then back again to a more informed engagement with the case, now "knowing" what to do, enacting that knowing, then beginning the circuit anew. To be sure, this kind of engagement with the case at hand, as well as deliberation and weighing up of alternatives, is required but does not fully capture the idea that the "outcome" of knowing and learning is a transformation in one's way of *being toward* the case at hand. When the nurse determines an appropriate and effective way of dealing with the patient before her, when the teacher decides what is the best way to teach the student, they are both reproducing and reconstituting their relationships with one another, their self-understandings, their identities, and their ways of going on with one another (Forester, 1999). Thus, what is at stake is not simply a form of knowledge but a transformation of the way of being, so to speak, of the practitioner resulting from the union of knowledge, virtue, reflection, and action (Coulter & Wiens, 2002).

Practice-Oriented Evaluation

The central claim of evaluation that is grounded in the practical knowledge traditions and the way of thinking of practice that is sketched above is that evaluation ought to begin and end in practical action—in the relationships and networks of people, in their obligations and responsibilities, in their memories, language, and interactions (Forester, 1999). This kind of evaluation aims to illuminate and open to critical reflection the kind of knowledge that resides not in scientific statements of program outcomes and effects but in practice. Thus, the kinds of knowledge it is concerned with are located in lived action (competence of acting, style, practical tact, habituations, and routine practices), in the body (gestures, demeanor, corporeal sense of things), in the world (in being "at home" with what one does, dwelling in it), and in relations (encounters with others, relations of trust, recognition, intimacy) (Van Manen, 1999).

Although we most certainly do bring scientific evidence to deliberations of the means and ends of our practices, much more is at stake in such deliberations. What transpires there has everything to do with membership of various kinds (member of a community, member of a pro-

fession, etc.) and with matters of identity, appreciation, respect, confidence in action, and ability to act together.

A practice-oriented approach to evaluation is based on several core commitments. First, it holds that at the heart of the practical action of every professional undertaking is an imperative to evaluate. This imperative is understood as a "deliberative conversation about value, about the appropriateness and aptness of goals and means"(Forester, 1999, p. 115).

Second, it assumes that practitioners may not always be particularly consciously aware of this imperative. The repetitive and cumulative effect of following routines, mental models, and so on often leads to a disposition that is unreflective and uncritical. People come to believe that answers to value-rational questions—for example, Where are we going? Is this desirable? Who gains or who loses by our decision?—can been settled once and for all by having the right information on means.

Thus, third, the approach to evaluation advocated here is pedagogical—it is a process of teaching and learning about the deliberation of value; one that is encouraging and facilitative of critical reflection and self-transformation in conversation with others. In such a process, one cannot neatly decouple the act of *doing* inquiry or evaluation from the act of its *use*. This raises the likelihood that evaluators begin to take on the characteristics of an action researcher: They assume a responsibility for teaching this way of thinking about evaluation as a deliberative conversation about value and facilitate/orchestrate the examination of value-rational questions in a given practice. They also recognize that, because practitioners often learn from studying the experiences of others in situations similar to their own, they have a responsibility to create a written narrative account of the process of deliberating value to serve as a case for others to examine and use in their own deliberations.

Fourth, this way of thinking about evaluation assumes that learning about the deliberation of value is a social, shared undertaking, not a private matter for each individual. In other words, we come to reasonable and just answers to questions of appropriate means and ends through dialogue and conversation with others. Consequently, this kind of evaluation is committed to the goals of participation, collaboration, and cooperation in the exploration of the evaluative imperative at the center of practice. These conditions do not always naturally obtain; thus, it is the evaluator's responsibility to foster them—to help create a public space for critical reflection on the means and ends of a practice (Kemmis, 2004). Within this public space, practitioners are encouraged to examine the contexts, or what MacIntyre (1981) calls the orders, in which practice is located: the biographical order—the unfolding of a practice in the life history of practitioners; the moral order—the distinctive virtues and social goods internal to the practice; the historical order—the traditions of the practice; and the institutional order—the institutional locations and arrangements that both sustain and, at times, threaten a practice.

Finally, this kind of evaluation is committed to the idea that the deliberation of values in a practice always involves considerations of social justice. In other words, deliberating appropriate means and ends of practice implicates broader questions about the aims of society. To paraphrase Kushner (2000, pp. 32-33): Every social practice is a reaffirmation of the existing social contract (and the issues of power, authority, social structure, and so on that are entailed), and each evaluation of practice is an opportunity to review the assumptions and consequences of that contract.

A practice-oriented approach to evaluation (much like a social activist approach to community psychology) is at once philosophical, contextual, pragmatic, and transformative (Prilleltensky, 2001). It is philosophical because it encourages examination of questions of what should be—questions of social value and justice, as well as questions about the kinds of practitioners we ought to be in our social interactions with one another. It is contextual because it is grounded in the lived experience of members of communities, in the study of practical

action, in questions of what is—what are we doing now in this place and time; what are our standing commitments, values, norms, and routines? It is pragmatic because it continually asks what can be done, what is feasible; what strategies can we adopt, what actions can we take to change things? It is transformative because in deliberation, the possibility emerges of new self-understandings, new identities, new agreements, and new ways of going on together.

To judge the success of this dialogic examination of practice, we might do well to attend to the following criteria (Prilleltensky, 2001, pp. 759-761):

1. *Balance between philosophical and pragmatic input*. We must have philosophical and conceptual analyses of the kinds of values, principles, commitments, and actions that lead to 'good' practices. But these abstract, generalized notions must always be grounded in lived experience. Conversely, we cannot simply have grounded knowledge, for interpretations of our experience depend on having generalized concepts.
2. *Balance between understanding and action*. Genuine learning and understanding are not simply private acts of intellectual accomplishment. The point of knowing is to realize some better way of being. Likewise, the urge to act must be tempered by the need to know.
3. *Balance between process and outcomes*. Dialogue is not an end in itself, but neither do ends automatically justify the means. A creative tension between outcomes and process must be reflected in this kind of evaluation.
4. *Balance between differing and unequal voices*. A praxis-oriented evaluation must be particularly attentive to meaningful input from different perspectives and particularly from voices often rendered inaudible in the political system.

Of course, these criteria for judging the success of a practice-oriented evaluation offer little comfort to anyone looking for procedures and rules, for these criteria are themselves matters subject to deliberative conversations about value.

Final Thoughts

This way of thinking about the centrality of practice to evaluation is especially necessary at the present moment because it helps restore a sense of social practices as moral-political and not simply scientific undertakings. The practices of teaching, counseling, social work, administration, and so on are not simply delivery mechanisms that provide services to clients seeking utilitarian ends. They are sites of human flourishing—it is in the interaction between teacher and student, counselor and patient, social worker and client that we become aware of what it means to be human, to live together, to prosper (and not just function). Reducing practice to performance—that is, to the efficient and effective accomplishment of service based on scientific evidence of what works—reflects an exceedingly narrow conception of the kinds of evaluation knowledge, learning, and inquiry relevant to enhancing practice. Moreover, this is an impoverished understanding of our selves and our practices that has two detrimental consequences: First, over time, it erodes the sense of personal moral responsibility that a practitioner must assume for his or her decisions in interacting with the student, the client, the patient, and so on. In acting toward another, a practitioner is making a decision about what the practitioner believes is right to do and to be in that relationship. Under an ideology of instrumentalist science-based thinking, if practitioners' actions fail, they are led to believe that failure is somehow not theirs but a failure of the method or procedure they adopted. Thus, the ethical and moral responsibility of practitioners to others is eroded or transformed into mere contractual terms. Second, over time, we tend to become quite disenchanted and cynical regarding the value of asking questions about the nature and meaning of organized social practices and the social goods they struggle to define and enact. Such difficult questions begin to disappear from the zone of practitioners'

daily concerns and become relegated to philosophers interested in practical reasoning and the professions to muse about. Gradually, it disappears from the practitioner's horizon that a core aspect of the very idea of being a professional practitioner is precisely to wrestle with the ends or goods that a practice is intended to serve. To recover that idea, to provide an antidote to a narrow conception of evidence-based thinking, we need to restore the centrality of practice to evaluation.

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Making Assessment Practices Valid for Native American Students

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Introduction

Given the longstanding detrimental effects of testing policies and practices on the educational outcomes of countless indigenous students (Chavers & Locke, 1989; Deyhle, 1987; Fox 2000; Nelson-Barber & Estrin 1995; Neely & Shaughnessy, 1984), finding ways to minimize testing biases and reveal students' strengths is a high research priority. Recent educational improvement efforts designed to establish clear and definitive standards of excellence for all students (Public Law 107-110—No Child Left Behind Act of 2001 [NCLB]), together with the Federal Government's commitment to excellence in indigenous education (Executive Orders 13096 and 13270; Heine, 2002), ought to mean that schools are becoming better equipped to assure that all students make progress and meet rigorous standards. However, there is little evidence that these promises of higher standards of effectiveness in the classroom and greater teacher accountability are translating into more equitable opportunities for indigenous children. We contend that an educational system that increasingly relies on test-based accountability and confers on testing a major role as an indicator and promoter of educational change can itself marginalize students.

What the Research Shows

A little over 10 years ago a series of commissioned reports and initiatives identified linguistic, cultural, and community-based components as markers of high-quality indigenous education (Indian Nations at Risk: An Educational Strategy for Action, 1991; Final Report of the White House Conference on Indian Education, 1992; Public Law 101-477—Native American[1]Languages Act of 1990[2]). A decade later an expansive literature review on Native student academic performance (Demmert, 2001) further defined elements fundamental to indigenous students' success in school. Demmert found that the following were key means to improving the academic performance of indigenous students: (a) maintaining linguistic and cultural congruence between home and school (cf., Lipka et al., 1998), (b) educating students in their heritage language (cf., Ovando, 1994, Smith, 1998; Watson-Gegeo, 1989), and (c) use of local knowledge and culture in the curriculum (cf., Barnhardt, 1999; Nelson-Barber, 2001; Watahomigie & McCarty, 1994) (In addition, see Alaska Native Knowledge Network, 1998; Lipka &

Adams, 2002; Stiles, 1997). These same elements were also associated with (a) lowering dropout rates (Eberhard, 1989), (b) enhancing literacy skills (George & Just, 1992; McCarty, Wallace, Lynch, & Benally, 1991), (c) supporting interpersonal development (Smith, Leake & Kamekona, 1998), and (d) increasing enrollment in college level courses— particularly in mathematics, science, and engineering (Alaska Native Knowledge Network, 1998).

One of the first quantitative studies to systematically document improved academic performance in a core content area using culture-based curriculum comes from longitudinal work conducted in rural Alaska (Lipka, J., & Adams, B. (2004)Lipka, 1994; Lipka et al., 1998). The research group composed of elders, local teachers, University faculty and other researchers first developed mathematics curricula that explicitly connect pedagogy to Yup'ik Eskimo elder knowledge and local Yup'ik culture (Lipka et. al. 1998). Via a quasi-experimental design with random assignment of students to different groups, researchers gauged impact on the basis of pre- and post-test score differences between groups. The tests were not standardized or published but, rather, developed by the research team. The study's outcome measures were the gain differences between scores on pre- and post-tests per student.

Findings show that Yup'ik students who participated in instruction based on the treatment modules out-performed comparable groups of Yup'ik control students, who participated in instruction based on the regular math curriculum Lipka and Adams (2004). The results are even more remarkable, considering that the project tests were not, themselves, constructed in a culturally responsive manner. In fact, they look very much like the usual standardized tests. At the present time, the project is developing performance tasks that are culturally responsive; and those instruments may well reveal greater learning differences between treatment and control groups.

Given current political and fiscal realities, these students will most certainly also be evaluated on the basis of standardized tests. Of course, it is not yet known what such standardized tests will yield following student experience with the treatment curriculum; nevertheless, it is clear that even if students are judged according to standardized tests, this work offers great promise for further development of educational approaches that are rooted in the learning and problem-solving traditions of indigenous cultures.

What Are the Implications for Assessment?

If, in fact, the use of local wisdom, recognition of culture, and active involvement of community are mainstays in the established standards of educational practice in indigenous communities (and contribute to student success), why is this understanding not applied to the realm of assessment? Are we confident that test developers have broad enough understandings of indigenous students' ways of knowing to enable them to construct appropriate assessments? Do those who administer the tests have adequate preparation to make appropriate use of local knowledge in the assessment process? Are they able to recognize excellence when students demonstrate their learnings in unfamiliar ways? For that matter, do program evaluators have the skills to engage in cross-cultural evaluation so that judgments about what works for Native students are valid (Nelson-Barber, LaFrance, Trumbull, & Aburto, in press)?

Also one must ask whether the standards themselves and the ways achievement are typically judged are culturally congruent with Native communities' values regarding the education of their children (Demmert, 2005; Nelson-Barber & Estrin, 1995). For instance, Gordon (1992) has argued for developing "assessment procedures [that] are a more appropriate reflection of the ways in which people think, learn and work" (p. 2), which would more accurately "reflect the life space and values of the learner" (p.6). It is not just the inappropriateness of the tests themselves but also the ways they affect the entire educational process that must concern researchers and educators of Native students. The unfortunate outcome of the NCLB legislation may well be that educators of Native students move further away from culturally congruent curriculum, instruction, and assessment rather than increasing their use—despite all the evidence of their value and despite the intent of Executive Orders 13096 and 13270. What can be done, then, to assure that assessment and evaluation practices are valid and academically rigorous for indigenous students?

Incorporating "Cultural Validity" as a Core Concept in Assessment

This is precisely the question that prompted Solano-Flores and Nelson-Barber (2001) to propose that "cultural validity" in assessment development and testing practices be recognized as a core component of validity, much as test use (consequential validity) has become (Messick, 1989). Following Vygotsky (1978), Solano-Flores and Nelson-Barber

argue that because sociocultural groups create meaning from experience in culturally determined ways, "individuals have predisposed notions of how to respond to questions, solve problems, and so forth. It follows that these predispositions influence the ways in which students interpret material presented in tests and the ways in which they respond to test items." (p. 554). The Solano-Flores and Nelson-Barber study investigated ways in which the thinking, communication, and learning styles inherent to students' cultures influenced how they interpreted and responded to standardized test items.

Three cultural groups participated in the study: Chamorro and Carolinian students from the Commonwealth of the Northern Mariana Islands; Yup'ik students from rural Alaska; and immigrant Latino students from rural Washington state. All were administered one item from a set of two mathematics and two science items selected from the pool of released items of the National Assessment for Educational Progress (NAEP) issued in 1996. The mathematics items involved basic computational and problem solving skills. The science items came from the Earth and Physical Science disciplines. After they responded to the items, students were interviewed individually to elicit information on how they related the item's content to various contexts of their personal experiences and daily lives, as well as how these may have influenced the reasoning and strategies used to complete the item.

Results show that *students' demonstrated competence depended on the match between the demands of a task, the context in which it is embedded, and the culturally developed skills of the learner*. The authors assert that current approaches to assessment do not consider "how these sociocultural predispositions influence student thinking" (Solano-Flores and Nelson-Barber, 2001, p. 554). Many teachers of indigenous children would agree. On the one hand they believe strongly that linking instruction to their students' cultures and ways of knowing can be critical to student success. On the other hand they question whether existing tests can elicit their students' knowledge (Deyhle, 1987; Nelson-Barber, Trumbull, & Wenn, 2000). When assessment is not congruent with curriculum and instruction, it cannot produce valid inferences about student learning.

We want to be sure that test developers and educators develop deep understanding of how to capture what is critical for students to know and be able to do in particular content areas and an ability to specify how well students must perform to be considered

content proficient (Nelson-Barber, 1999). This means first defining precisely what the critical domain knowledge and skills are and considering what students' linguistic, cultural, ethnic, and racial diversity mean for selecting content and instructional approaches across all subject areas. It also means having an understanding of what promotes or hinders achievement for students from different backgrounds. And, when educators do appropriately bring in historical content or implement culturally congruent pedagogy, it means having the confidence that all students will have "fair" opportunities to "show what they understand about the construct[s] being tested" (Lawrenz, Huffman, & Welch, 2001, p. 280). If students are to have such opportunities, testing must take into account students' ways of knowing and demonstrating their knowledge (Solano-Flores & Trumbull, 2003; Swisher & Deyhle, 1992).

Thus this paper centers on the need for quantitative and qualitative studies on the development of culturally valid assessment instruments and culturally valid assessment practices. New methods of assessment development and the resulting instruments must be tested appropriately to determine what is effective and valid for students in various settings—and for subpopulations within those settings. For example, local assessment development, rather than adaptation of existing assessments, is one way of beginning to address cultural validity (Solano-Flores, Trumbull, & Nelson-Barber, 2002) As we discuss below, assessment itself is inherently cultural; thus achieving cultural validity in assessment requires attention to all aspects of assessment, from test design through test score use.

The Cultural Nature of Assessment

Assessment is a cultural process, like all other aspects of schooling. Whether it takes the form of a standardized test, an informal oral quiz, or an observation of a student performance, assessment is associated with culture-based assumptions about how it should be conducted and how students should participate. We do not intend to overgeneralize, as Native peoples are not all the same and there are certainly individual differences within Native groups. Still, a number of observations bear mentioning. For example, the assumption that a student should respond to questions to which the teacher already knows the answer is not held by school-age children in all cultures (Heath, 1983). To go a step further, studies in some indigenous contexts conclude that many students

will not respond to questions at all (e.g., More, 1989; Rhodes, 1988). Such accounts of Native students' seeming reluctance to participate verbally in the classroom often cause outside observers to characterize them as nonverbal or 'silent' (e.g., Dumont, 1972). Certainly educators need to learn more about local norms of communication in their students' communities. However, in addition, McCarty (2002) suggests that Native students' silence may be attributable to the fact that "the only available models for questioning and 'speaking up' were the silencing practices of Federal boarding schools and, more recently, the scripted, right-wrong 'dialogues of the TESL program and Basic Skills" (p. 138). She notes that an inquiry-based literacy approach that incorporated Navajo language and culture elicited high-level thinking and participation.

With regard to Native students, it has often also been observed that the inherent competitive frame of many forms of assessment diminishes their willingness to participate (Nelson-Barber & Estrin, 1995; Swisher & Deyhle, 1992). The heavy reliance on verbal demonstration of learning may not be culturally congruent for many Native students who have grown up in environments that prize the showing of knowledge through other means and respect for elders (including teachers) through silence.

Studies with Native students and those from other cultural groups have shown that the topic of a writing assessment can have a powerful influence on the quality and quantity of students' writing. Navajo students whose teachers integrated local standards with state standards and aligned curriculum and assessment through a portfolio process were able to engage in high-level literacy activities and demonstrate their learning successfully (Koelsch & Trumbull, 1996). The rubrics for scoring students' writing allowed teachers to evaluate writing proficiency from the perspectives of both Navajo and "school literacy" (Koelsch & Trumbull, p. 277). For example, a piece of writing that is viewed as a fictional product of the imagination from the perspective of "school literacy" may be viewed as a "cultural narrative" (Koelsch & Trumbull, p. 277) by a Navajo reader.

In a very different context, cultural insight on the part of a third-grade teacher allowed immigrant Latino students to demonstrate their writing skills better on a schoolwide essay test. When they were asked to write about "an experience with their family" in their classroom they produced essays that were longer, more elaborated, and

more accurate in use of writing conventions (capitalization, punctuation) than when they wrote about "what it's like to be a good friend" (Trumbull, Diaz-Meza, & Hasan, in press). The school then adopted the new prompt for the following year's third-grade test.

Sources of Cultural Bias in Assessment

Recent research and commentary on assessment development and use speak to the potentially broad range of biases introduced by large-scale assessment (cf., Hood, 1998; Rivera, Vincent, Hafner, & LaCelle-Peterson, 1997; Rodriguez, 1996; Solano-Flores & Nelson-Barber, 2001; Solano-Flores & Trumbull, 2003). Similar issues extend to classroom assessments, as teachers often use the principles and formats of large-scale, standardized models when they construct their own informal assessments (cf., Kusimo, Ritter, Busick, Ferguson, Trumbull, & Solano-Flores, 2000; Stiggins, 1997). The content of standardized tests has frequently been criticized on the grounds that it is more familiar to students from dominant culture, middle-class households (see, e.g., Popham, 2001). In fact, it is not only content but also every aspect of assessment or testing that is prone to cultural bias. Table 1 below summarizes the factors that can contribute to bias.

Table 1 Sources of Bias in Testing of Native Students

Source of Bias	Examples
Test content	Tests that are created by textbook publishers or testing companies may include content that is unfamiliar or even offensive to some students (Popham, 2001). Content is not well matched to the actual curriculum of a given school, particularly if the curriculum draws heavily on local cultural wisdom, knowledge, and skills.
Test language	The language of test instructions and prompts is often unnecessarily complex, adding non-construct-related difficulty to test items (cf., Solano-Flores & Trumbull, 2003; Abedi, 2003). Native students who speak a "non-standard" dialect of English or who are in the process of acquiring academic English may not be familiar with some terminology commonly used on tests.

Source of Bias	Examples
Test format	Some common formats (multiple choice and true/false, e.g.) are less preferred by American Indian students because they force a single answer rather than reflection and respect for more than one perspective (Macias, 1989).
Test administration	On-demand assessment may put Native students in the position of engaging in a trial and error approach to a task, whereas they have been socialized to attempt a task only when they believe themselves ready to perform well (Swisher & Deyhle, 1992). The timed nature of many tests may penalize students learning the language of school and/or whose cultures have an orientation to time different from that of the dominant culture (Haladyna, 1992; Shaw, 1994).
Test scoring	On short answer and extended response items, differences in language usage or spelling may be misinterpreted as errors of comprehension (Beaumont, deValenzuela, & Trumbull, 2002).
Test score interpretation	Automated scoring cannot identify *why* a student responded as he/she did. When students' cultural contexts differ from those of the group on whom a test was normed, different patterns of response can be expected. When teachers score or grade assessments, they may fail to understand a student's response because of differences in language and culture (Beaumont, deValenzuela, & Trumbull, 2002).
Test use	Decisions about program placement, course eligibility, grades, graduation, and the like should not depend on a single test outcome (Anastasi, 1990). The knowledge, skills, and understanding of "minority" students may be underestimated by tests designed for "mainstream" students; therefore standardized tests should always be complemented by other assessments such as teachers' observations and judgments.

Minimizing Bias and Increasing Equity in the Assessment of Native Students

Because of these kinds of concerns about the validity of standardized, norm-referenced tests, considerable attention has been paid to "accommodating" students' test taking needs (Abedi, 2001; Abedi, Lord, Hofstetter, & Baker, 2001; Butler & Stevens, 1997). English language learners, who may be given extended time, access to dictionaries, or modification of the language, have been the primary beneficiaries of these methods. However, given the impact of the interaction of cognitive and sociocultural factors mentioned above, it is clear that speaking English as a second language cannot be the only criterion that affects test performance. Standardized tests can lack validity for many students from non-dominant communities who do speak English as a first language. More important, accommodations do not address the fundamental concerns for cultural validity. What, then, can be done to avoid potential sources of bias and inequity in assessments? And how can understanding these elements contribute to improving educational outcomes for indigenous students?

Turning to the Wisdom of Local Culture

One useful way of thinking about a culture is as a community in which people tend to engage in certain practices in particular ways (Gutiérrez & Rogoff, 2003). This approach is more useful than thinking of members of cultures as having specific traits. By focusing on processes and activities, we can more readily understand how culture intersects with assessment.

Though not all indigenous peoples have embraced formal western education, they have always considered the understanding of their own cultures and particular environments as indispensable to schooling (Szasz, 1999). Even through the times of forced assimilation, elders and other community members taught new generations the skills, traditions, and knowledge of their peoples, employing the requisite cognitive tools to suit their local purposes. According to Resnick (1991), such "[c]ognitive tools embody a culture's intellectual history; they have theories built into them, and users accept these theories" (p.7). The experiential, hands-on education in a real-world context common to Native communities has built into it the opportunity for true, authentic assessment: High quality performance equates with survival.

It is useful to reflect on the ways that Native peoples traditionally gauged improved learning—ways that can be incongruous with widely accepted, more mainstream ways of demonstrating learning. In their comprehensive review of research on American Indian and Alaska Native education, Deyhle & Swisher (1992) give accounts of some of the cultural and ethical influences on education in Native communities. For example, both adults and children are expected to maintain a respectful attitude toward any task. It may be considered disrespectful to attempt a task before one is relatively sure of doing it correctly. Consequently, Native children are accustomed to being given opportunities to learn privately and to practice on their own before performing in public; moreover, it is often the student who determines when he or she is ready to perform (Swisher & Deyhle, 1992). These are not cultural prescriptions, so to speak, but examples of the kinds of behaviors that can be misconstrued by those outside of these cultures.

Today, drawing on these strategies along with traditional approaches that emphasize cooperation and reflection in a meaningful context, elders and others continue to prepare younger generations for success in their own communities, helping them develop culturally based "funds of knowledge" (cf., Lipka, et al., 1998; Moll, Amanti, Neff & Gonzalez, 1992). It is interesting that these traditional educational strategies are remarkably similar to those promoted in current educational improvement efforts that "regard students' culture-based experiences and ways of learning as resources for designing daily instruction that provide students with tools to address needs and solve problems of their own environment" (Trumbull, Nelson-Barber, & Mitchell, 2002, p. 2). Likewise, many assessment reformers have encouraged the use of methods, such as observation and portfolio assessment, that are embedded in or integrated with instruction (e.g., Hein, 1991; Koelsch & Trumbull, 1996; Mangione, 2004) in much the way that Native parents and elders have used authentic situations as opportunities for assessing young people's learning.

Paying Particular Attention to the Language of Testing

Some outcomes of research on the assessment of English learners point to promising assessment modifications that educators of Native students should consider. The *Standards for Educational and Psychological Tests*, developed jointly by the

American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education state that every assessment is an assessment of language (AERA & APA, 1999). There is no way to eliminate language completely from assessment practices, but there are ways to reduce its interference with the assessment of content knowledge. Research has shown that simplifying the language used on tests can reduce the performance gap between English learners and native English speakers. Simplification may be applied to vocabulary, grammar, or length of a prompt. However, caution needs to be taken to ensure that test developers not simplify the conceptual aspects of test items in the process of linguistic simplification.

Students whose academic language proficiency (oral or written) is low [LEP] struggle with language-heavy assessments, like many of the newer performance assessments (Kiplinger, Haug, & Abedi, 2000; MacGregor & Price, 1999). Recent research with large numbers of English learners and native English speakers suggests that "the higher the English 'language load' in the assessment, the larger the gap between performance of LEP and non-LEP students" (Abedi, 2003, p. 4). For many Native students, learning the academic language of the school may be comparable to the task that English language learners face. They may have mastered everyday English but not the language of school. Some may speak another language at home, meaning that linguistically they cannot be treated as equivalent to native, monolingual English speakers when it comes to testing (Valdés & Figueroa, 1994).

The particular academic language of assessments—apart from the specialized vocabulary of a content domain—may, itself, be a source of what psychometricians call "measurement error." Consider the vocabulary and syntax of a typical test item shown in Figure 1 below. If it is indeed true that the language of assessments is unnecessarily interfering with their validity, parallel research on modifying the language of assessments for Native students is something that ought to be undertaken.

Figure 1 Fourth-grade mathematics item

In my carpenter shop, I make only three-legged stools and four-legged tables. One day I looked at my day's output and counted 31 legs. How many tables and stools could I have completed that day?
National Assessment of Educational Progress (NAEP), 1996

Using Cultural Experts to Score and Interpret Student Performance

Earlier (in Table 1), we alluded to the need for those who evaluate students' writing and other learning products to be schooled in the language and culture of the students. For interpretations of student performances to be valid, those evaluating performance results must know in great detail the contexts of students' learning and assessment, including: previous experiences in and out of school; how students have been educated outside of school; the languages of learning in and out of school; student affect, motivation, and apparent effort; and the more immediate conditions surrounding the assessment itself, such as time allotted and teacher supports given. Understanding the real meaning of a student's response to an assessment question—sometimes even a seemingly simple question— depends upon these kinds of knowledge. The following example underscores this fact.

In Chinle, Arizona, on the Navajo nation, Navajo teachers collaborated with non-Navajo teachers to design performance assessment tasks that were culturally valid (Koelsch, & Trumbull, 1996). Among these was the "Hero Task" which required fourth-grade students to write a fictional or nonfictional narrative about a "hero," who could be a well-known figure or someone the student knew. The narrative was to incorporate a visual, symbolic illustration (in the form of a mandala) of the hero's character traits. The activity was a personal extension of the class's reading of *Island of the Blue Dolphins* by Scott O'Dell.

The students' resulting narratives were evaluated in terms of both "school" literacy standards and Navajo storytelling standards. For example, "school" literacy proficiency would entail structuring a narrative with a beginning, middle, and end. Navajo storytelling proficiency would entail representation of Navajo values such as environmental awareness. Whereas state standards make a firm distinction between fiction and non-fiction, Navajo teachers stressed that a narrative that demonstrated genuine cultural knowledge—even though it was not a "true story,"—was not considered fiction from their perspective. Rather, it was regarded as a *cultural narration* (Koelsch & Trumbull, 1996, p. 274). When Navajo teachers read their students' narratives, they read them from a bicultural perspective that valued both Navajo ways and school ways of being proficient.

This example illustrates how important context is in assessment—the context of children's past experience, the context of an assessment item, and the school context itself. In this case, the Navajo teachers are able to bring some of the context of children's past experience into the classroom and into the testing situation because they have an understanding of all of those contexts. Until assessment practices with Native American students can be flexible enough to take into account the contexts of such students' lives, they will not meet a standard of cultural validity.

Discussion

Concerns about the appropriateness of mainstream assessments and assessment practices are well-founded and heightened because of recent educational policies and legislation. Much is already known about what works for Native students, and that knowledge needs to be brought to bear on assessment. At the very least, caution should be exercised when interpreting the meaning of Native students' assessment performance. High-stakes decisions about grade promotion, graduation or program eligibility must be made on the basis of more than one type of assessment, in part because of the wide range of influences that affect native students' performance. In the best possible situation, the school staff would include Native teachers who can help non-Native teachers understand and judge student work. As in any community, information flow between parents and teachers is also critical to understanding students' school performance.

Native communities have asserted renewed interest in culturally valid curriculum, instruction, and assessment. And, although the numbers of Native teachers are still small, there is increasing recognition that they, along with Native researchers and community members must be tapped as sources of important expertise if schools are to improve their capacity to teach Native students. By adopting a sociocultural orientation to understanding how Native students learn and know, educators can reflect more productively on classroom practices and their implications for Native students. Learning about the community, understanding the ways expectations of children are communicated, observing what children do at home—all are important for non-native Teachers, (Teachers, Panel, 1994).

We recognize the fact that even the most culturally responsive instruction and

assessment will not automatically translate into academic success for Native students. As Spindler and Spindler (1990) note, "Cultural differences do not explain all aspects of minority/mainstream relations, for there are always economic and political factors that enter into the interaction. Nevertheless the cultural process is always present…" (p. 79). These students still face the challenge of developing their own identity in the face of the multiple and sometimes conflicting demands of a highly complex social context (cf., McCarty, 2002). Mastering multiple cultures, alone, demands a great deal of time and energy, both in finite supply. However, even with these challenges, many Native students are thriving in programs that are based on culturally responsive curriculum, instruction and assessment. And—fortuitously—the current climate of reform provides an opportunity for educators, policymakers, and test developers to reexamine old assumptions and develop new bases of knowledge from which to re-create instruction and assessment.

It *is* clear that research on new approaches to assessment design and use that consider the role of culture in learning and assessment are needed. Studies within specific Native communities need to be done. They stand to shed light on the processes that inhibit or promote valid testing practices with Native students and provide rich, contextualized examples to stimulate research in other kinds of communities.

END NOTES

[1]Sec. 103 of P.L. 101-477 states, "The term 'Native American' means Indian, Native Hawaiian, or Native American Pacific Islander." 43 U.S.C. 1602 of the Alaska Native Claims Settlement Act of 1971 states that the term "'Native' means a citizen of the United States who is a person of one-fourth degree or more Alaska Indian, Eskimo, or Aleut blood, or combination thereof."

[2]March 2003 Senate Bill 575 was introduced to amend the Native American Languages Act (Amendments Act of 2003) to include support for language nests (exemplified by the Maori in New Zealand) and language survival schools, and to demonstrate their positive effects on the academic success of indigenous students.

[3]Babiche Cultural Exchange, "Mathematics in Cultural Context" Curriculum Development Project, Coalition of Educators for Native American Children, language immersion programs in the U.S., Canada, Circumpolar North, affiliated territories and freely associated states in Micronesia, and New Zealand, the OERI-funded Center for Research on Education, Diversity and Excellence, the 7th Generation Project, among others.

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Culturally Competent Evaluation in Indian Country

3

Culturally competent evaluation in Indian Country requires an understanding of the rich diversity of tribal peoples and the importance of self-determination and sovereignty. If an evaluation can be embedded within an indigenous framework, it is more responsive to tribal ethics and values. An indigenous orientation to evaluation suggests methodological approaches, a partnership between the evaluator and the program, and reciprocity.

Culturally Competent Evaluation in Indian Country

Joan LaFrance

Given the rich tapestry of tribal cultures in the United States, it is presumptuous to assume that any evaluator, whether an Alaskan Native or a member of an American Indian tribe (or a non-Indian), can understand the culture of every group. Rather than trying to master multiple cultural specificities, the goal of a competent evaluator, especially in Indian Country, should be to actively seek cultural grounding through the ongoing processes of appreciating the role of tribal sovereignty, seeking knowledge of the particular community, building relationships, and reflecting on methodological practices. This article is an opportunity for discourse and reflection on these many levels. It discusses the importance of understanding the implications of sovereignty when working in Indian Country, the significance of an emerging indigenous framework for evaluation, Indian self-determination in setting the research and evaluation agenda, and finally particular methodological approaches I find useful in my evaluation practice.

For this discussion, I use the term *Indian Country* to describe the collection of tribal nations and Alaskan native communities that occupy a shared homeland and live in culturally bounded communities. The term *indigenous* refers to the first native residents of lands that have been taken over by outsider populations—specifically, Indian tribes and Alaskan Natives in North and South America, and the Pacific.

An early draft of sections of this chapter was presented at the AEA annual meeting in 2001. The chapter also draws from contributions to "Promoting Culturally Reliable and Valid Evaluation Practice," a chapter to appear in an edition of *Evaluation and Society* that I coauthored with Sharon Nelson-Barber, Elise Trumbull, and Sofia Aburto of WestEd.

NEW DIRECTIONS FOR EVALUATION, no. 102, Summer 2004

Understanding Sovereignty

Few Americans fully appreciate the political status of American Indians and Alaskan Natives. In Indian Country, sovereignty expresses recognition of and respect for tribal governance and nationhood. Treaties between tribes and the United States established a unique federal-tribal relationship. This relationship is also recognized in numerous executive orders and acts of Congress. Programs operating on Indian reservations operate within a civil structure unfamiliar to most Americans. Tribes are governmental units separate from state and local governments. In many tribes, the governing bodies include a general council, composed of all tribal citizens age eighteen and above, and an elected business council, which is usually called the tribal council. Other tribes have more traditional forms of governments based on historical leadership patterns. Recent federal laws have encouraged tribal self-determination and self-governance. As a result, many tribes now operate their own educational, health, and welfare programs through funding relationships with the federal government.

More than thirty years ago, a well-known husband-and-wife anthropologist team noted that their profession had studied American Indians more than any other group in the world (Swisher, 1993). This intensive scrutiny from the outside has been problematic to many American Indian people, whose tribes and families have suffered from a long history of intrusive studies that have built the reputations of anthropologists and other researchers but brought little more than loss of cultural ownership and exploitation to Indian people. The research studies often depicted Indians in a naïve or negative light. Trimble's review (1977) of articles on Indian educational research found that most of the literature concentrated on problems centered around the investigator's interest, and not those of the tribal people from whom the data were obtained. Because evaluation draws on methods of anthropology, among other social sciences, evaluation in Indian Country may suffer from a similar legacy.

With the growing emphasis on self-determination, it is not surprising that some tribal governments are establishing formal processes to protect themselves from the abuses of research. Although program evaluation is somewhat different in that it seeks to understand and contribute to programs within the context of the community, the collective tribal history with research has contributed to a general distrust of outsiders who come to study, ask questions, and publish their findings (Crazy Bull, 1997). Evaluators need to learn whether official approval is needed to conduct the evaluation, and evaluators must be sensitive to particular tribal processes involved in working with research committees. Tribal sovereignty also fuels concern about access to data and uses of evaluation information. Since tribes are continuously engaged in struggles to protect their rights, they are hesitant to have evaluation findings reflect negatively on the social, economic, or political goals of the community.

Because tribal governments are much smaller than local and state governments, programs operating under tribal authority are much more closely connected to local political structures than are most other publicly funded programs. As a result, programs operating under tribal governing structures tend to be more susceptible to social and political forces at work in a community. As such, they have a greater obligation to be responsive to community priorities and concerns. Evaluation can make an important contribution to developing responsive and effective programs in tribal communities. The challenges for culturally competent evaluators in Indian Country are to move past ingrained reticence toward research and instead actively engage the key stakeholders in creating the knowledge needed to deliver effective services.

Evaluation can become even more responsive to tribal programs if it is couched within indigenous "ways of knowing" and knowledge creation. The National Science Foundation (NSF) has funded a project of the American Indian Higher Education Consortium (AIHEC) to develop an "indigenous framework" for evaluation. The framework will guide a training curriculum for educators in Indian Country. AIHEC is undertaking this work because more Indian communities are developing and implementing new strategies for improving the educational attainment of their youth that draw from traditional values and culture. In so doing, it is urgent to establish new evaluation processes that are broad enough to accommodate and value different ways of knowing, build ownership and a sense of community within groups of Indian educators, and efficiently contribute to development of high-quality and sustainable Indian and Alaskan native education programs. Building an indigenous evaluation framework will contribute to the national evaluation discourse through inclusion of indigenous epistemologies—ways of knowing—that are not typically included in standard Western evaluation models. By supporting incorporation of indigenous epistemologies into Western evaluation practice, the field will be more responsive to the educational interventions that are using traditional and cultural approaches.

The Case for an Indigenous Evaluation Framework

In her discussion of decolonializing research in indigenous communities, Smith (1999) advocates the importance of creating designs that ensure validity and reliability by being based on community values and indigenous ways of knowing. Deloria (1999) argues that there is a need to make a concerted effort to gather traditional tribal wisdom into a coherent body of knowledge: "I believe firmly that tribal ways represent a complete and logical alternative to Western science. If tribal wisdom is to be seen as a valid intellectual discipline, it will be because it can be articulated in a wide variety of expository forms and not simply in the language and concepts that tribal elders have always used" (p. 66). Garroutte (2003) argues that indigenous ways of knowing can find a place in the academy only if

those with access to the academy make it a safe place for indigenous knowledge. Evaluation is a good candidate for building this bridge. Though based on Western research models, evaluation, as Weiss (1998) notes, is a practical craft; evaluators engage in the craft to contribute to program quality. With their nod toward practicality, evaluators can take liberties to explore cultural epistemologies that differ from those taught in the academy if such exploration contributes to the validity and usefulness of evaluation in the context of program operations. Those evaluators who belong to the academy should also be able to bring the fruits of their explorations into the academic discourse. Consequently, evaluators who learn how to practice in a culturally competent framework have the potential for changing not only the field of evaluation but also conversations on knowledge creation, its components, and its ramifications. For this reason, I would like to share some of our emerging thoughts about an indigenous framework for evaluation.

Elements in an Indigenous Framework

There is a growing discussion among indigenous scientists and evaluation experts about native or indigenous approaches to knowledge generation that are in contrast to Western ways of knowing. At a recent AEA conference, Hayley Govina (2002) described how her Maori values required that in her culture "evidence" must be "trust-based" and grow out of mutual understanding and relationship. She contrasted this Maori "valued knowledge" approach with a Western research model that is "evidence based" and capable of selecting out factors and looking at them in isolation. At the same AEA conference, Andrea Johnston (2002) described how Western evaluation logic models are linear and interested in isolated domains such as indicators or factors. In her Ojibwe world, knowledge is holistic, and the focus is on how the spheres (of factors) overlap to produce growth. In his book on native science, Greg Cajete (2000) contrasts the opposing cosmologies of Western culture, where a God is apart from the earth and man is given dominion over the material world, and the indigenous belief that man comes from the earth and all elements of the world are equal. In his work, Cajete defines models, causality, interpretation, and explanation in ways that go beyond objective measurement but honor the importance of direct experience, interconnectedness, relationship, holism, and value.

Indigenous knowledge values holistic thinking (Cajete, 2000; Christensen, 2002), which contrasts with the linear and hierarchical thinking that characterizes much of Western evaluation practice. Cajete also describes the profound "sense of place" woven throughout native thought. This strong connection to place, location, and community is in sharp contrast to modern American values of mobility and individualization—values that often define "success" in contemporary America.

Cajete further describes how Indian people experience nature as part of themselves and themselves as part of nature, adding that "this is the ultimate form of being 'indigenous' and forms the basis for a fully internalized bonding with that place" (p. 187). Although history of contact with Europeans has altered indigenous connections to their original lands, the sense of place is still a deeply held value. Despite their outward appearance of poverty and limited development, reservations are cherished homelands. Tribes invest energy and resources to regain lost land and develop opportunities on the reservations. For many programs operating on reservations, an important criterion of success is their contribution to the larger tribal goals of restoration and preservation.

Indian tribes also possess a strong sense of community. This is found in many tribal languages, in which the name for the tribe translates into English as "the people," as is the case for the *Dené* (Navajo), or the *Anishinabe* (Chippewa or Ojibwe) "spontaneously created people. Original tribal names distinguished the uniqueness of the group in relation to the rest of the world" (Deloria, 1994). Maintenance of the tribal community is an important criterion of successful programs and services in Indian Country.

Christensen (2002) describes the values of an elder epistemology, noting that "with its emphasis on oral skills it is an important intellectual construct, yet it is neither practiced nor even deemed relevant in the academic community" (p. 5). Drawing from the example of elder teaching, Christensen describes the role of respect, reciprocity, and relationship. In practice these three R's suggest an approach to evaluation that understands the tribal context, contributes knowledge and builds capacity in the community, and is practiced by evaluators who value building strong relationships with those involved in the evaluation. Elder teaching is based on a democratic value of give and take, equality, and participation. Smith (1999) reinforces this ethic of respect: "From the indigenous perspectives ethical codes of conduct serve partly the same purpose as the protocols which govern our relationships with each other and with the environment. The term 'respect' is consistently used by indigenous peoples to underscore the significance of our relationships and humanity. Through respect the place of everyone and everything in the universe is kept in balance and harmony" (p. 120).

Smith also describes an indigenous research agenda in which the very naming of the research agenda denotes self-determination. She writes, "What researchers may call methodology, for example, Maori researchers in New Zealand call Kaupapa Maori research or Maori-centered research. Such naming accords indigenous values, attitudes and practices a privileged, central position rather than obscuring them under Westernized labels such as 'collaborative research'" (p. 125). This suggests that as indigenous people move into evaluating their programs, they take charge of their own agenda; name their own evaluation processes; and use the methodologies that fit within their framing of place, community, values, and culture.

Reflections on Evaluation Methodology

In a country that values mobility, competitiveness, and progress, the Indian values for preservation, continuity, and community seem somewhat out of place. Yet it is these more conservative values that underlie many of the programs and projects that are subject to outside evaluations. Failure to understand such values, or imposing more mainstream assumptions upon the definitions of successful outcomes, results in evaluations that fail to contribute to tribal goals and program expectations. Understanding the importance of the values and the elements emerging in the indigenous framing of evaluation, as well as my experience doing evaluation in Indian Country, suggests a number of methodological considerations: the importance of formative evaluation, the value of building conceptual models, the importance of participatory processes and building evaluation capacity, issues in using qualitative and quantitative methods, and challenges in doing comparative research.

Importance of Formative Evaluation. The more conservative values of preservation and restoration operating on Indian reservations suggest that tribal programs need to be evaluated within their own context. The major evaluation questions become formative and tribe-specific ("How can we improve our service delivery?" or "What have we learned from this program or project?"). The view is inward; questions that imply comparison with populations outside the tribal community are less relevant to a community that is focused on its own growth and development. I found this to be true when researching evaluation issues in tribal schools in the 1980s. Reacting to a national evaluation driven by political forces in Congress against the tribal movement to control their own schools, the Senate commissioned a study of tribally controlled schools. The study specifically requested that these schools be matched with public schools serving students on the same reservation that also had a tribal school. The schools were compared on achievement, attendance, and per-pupil costs. Although the study failed to yield much of value for the political forces driving it, it definitely was not useful for administrators and staff in tribal schools. My research (LaFrance, 1990) found that the evaluation interests of tribal school personnel centered on "within school" concerns. They were interested in students doing well over their time in the school and whether they were developing a good sense of self-esteem. They wanted to know if the curriculum was meeting its objectives. They did value learning how their school compared to others; however, this question was of secondary importance and one that would not drive policy decisions.

To ensure sharing formative knowledge, I have arranged to regularly debrief program directors regarding initial evaluation findings. Since tribal institutions are small, the director or principal investigator is often the single person coping with delivery of social services or educational programs. Unlike administrators who work in larger institutions, she does not have

colleagues with whom to share concerns or learn about resources. Regular evaluation debriefings bring to her another person to whom she can talk about the issues encountered in operating the project. The evaluator becomes a resource for testing ideas or seeking advice. Although this might step outside the boundaries of evaluation, it is an important value-added contribution in resource-strapped communities (LaFrance, 2002b).

Building the Conceptual Picture. Given the inward orientation and the importance of understanding the assumptions and values driving programs operating on Indian reservations, I find it useful to work with stakeholders to articulate a theory of change (Weiss, 1998) prior to developing the evaluation plan. This is done in a facilitated workshop. The first objective of the workshop is to explicate the underlying assumptions guiding the program. All of the workshop participants have an opportunity to discuss what they do. Since everyone has tasks and activities, all are equally included in the discussion. Once activities are mapped out, the workshop participants are asked what will change as a result of the activities, or what their assumptions for change are. This is a much deeper question and leads to a healthy discussion among program staff about their beliefs, values, and hopes for the program.

The second objective for the workshop participants is to identify the major information they need to collect to find out whether their assumptions are correct. The information from the workshop is used to design an evaluation plan that is responsive to the program's values and assumptions. This approach results in a conceptual model for the program that may or may not look like the traditional logic model. In fact, I never use the term *logic model* since it connotes an intellectualism that can come across as elitist, mysterious, and Western. This is not to argue that conceptualizing the program is not important. In fact, it is essential to good evaluation design. However, the model should fit the program and the stakeholders' way of seeing the program. Traditional logic modeling formats might be too sequential and narrative-driven and not appropriate ways to capture the connections between program activities and underlying assumptions in Indian Country.

Participatory Practice and Capacity Building. A third objective of the workshop is to establish a participatory ethic for the evaluation. Staff and other stakeholders should participate in developing their evaluation. In a setting that values community, participatory processes are recommended. Also, as a result of building a theory of change together, I become a partner in an evaluation process that is owned by the program staff and stakeholders. The partnership builds relationships between program operations and the evaluation—between the program staff and the evaluator. This approach fits in the emerging indigenous framework because it demonstrates that the evaluation is *respectful* of the vision of the program held by its primary stakeholders and establishes *relationship* in executing the evaluation—two of Christensen's three R's (2002).

Given the high value tribal communities place on sovereignty and self-determination, it is recommended that evaluators look for opportunities to build evaluation capacity whenever possible. Using a participatory workshop to build the program's conceptual model and evaluation plan demystifies the process of evaluation and builds ownership in the evaluation. Other opportunities for building capacity should be explored. Many tribes sponsor their own community colleges, and this may be a way to build evaluation training capacity for budding evaluators from Indian Country. In one of my projects, which involved a large community survey, I was able to work with college students who were interning with the tribal office during the summer. They assisted in recruiting focus group participants, developing questions for the survey, and administering the survey at community events and meetings. Although these opportunities might be rare, a responsive evaluator should be aware that they are possible and try to incorporate as much training as possible in the evaluation plan.

Issues in Using Qualitative and Quantitative Methods. Given the highly contextual nature of tribal programs (operating in their sense of place and community), qualitative methods are central to the work. This is not to say that quantitative inquiry is not valued; rather, tribal communities have simply not found it a useful way to assess merit. Tribal populations in the programs being evaluated are often not large enough to put faith in statistical models; as a result statistical analysis is usually limited to descriptive summaries. Experimental design is generally discouraged, for ethical and practical reasons. It is difficult to assign adults or children into different "treatment groups" in small communities. Even if this could be done, the social and political reaction to a perception of unequal treatment could be quite disruptive in a small and fragile community.

Confidentiality is an important concern in both qualitative and quantitative approaches. When working in small communities, evaluators have to continually sort out information that does not protect the confidentiality of the respondent. When we asked a group of evaluators with experience in Indian Country to identify challenges in doing evaluation in tribal communities, one evaluator noted that her dilemma concerned how disposition of data influences accessibility to participants. She found that fear of repercussions if identity were figured out from responses to ethnographic inquiry or survey answers can discourage participation or response rate (Greenman, e-mail communication, 2003).

Furthermore, instrumentation can be problematic, especially when the funders require standardized measures. Another evaluator responded to our request for challenges by noting that she was being required to use a one-hundred-page intake form that was proving impossible to administer. When she undertook a cultural core measures search, she found few culturally validated measures for American Indians (Kumpfer, e-mail communication, 2003) and none that she could use. Most previously developed instruments need to be reviewed and often revised to fit the context of an

Indian reservation or community. Survey questionnaires have to be developed to fit the general education level in the community, which is often lower than in mainstream communities. It is important to test items on a cross-section of the community, because advisory committees often have a higher level of education or literacy than the general population.

Trimble (1977) describes an effort to measure self-esteem of Indian adults. The Association of American Indian Social Workers, sponsors of the survey, formed an advisory board to guide development of the instrument. Their goal was to develop a standardized instrument that could be used by Indians who were members of various tribes. He noted that there were culturally based objections to creating one instrument that would work across the diversity of tribal nations. However, a core of the advisory committee did not want to abandon the idea of using one instrument. The compromise was an instrument that included open-ended and sentence-completion items to capture personal expression.

The ethics of evaluation require informed consent of those being interviewed. However, special care should be taken when interviewing across cultures. In my summary of conversation among Indian evaluators attending a conference sponsored by NSF, I share Christensen's concern that elders often think that everything they say will be reported, and they do not understand that in a final document only certain quotes often represent their interview. Christensen argues that informed consent is "making sure that the evaluators comprehend what you are saying, and that you understand and consent to how what you are saying will be used" (LaFrance, 2002a, p. 67).

Challenges in Doing Comparative Research. Varying tribal histories, locations, resources, and size make it difficult to draw conclusions across tribal communities. Case studies and qualitative approaches that embed the program within the context of the community are generally more effective than quantitative studies that seek comparison across communities or groups of tribal people. However, summative evaluation is often informed through comparison. So how do you find comparison groups? Obviously it depends on the service or program under consideration, but here are a few suggestions:

Using retrospective measures. This method allows participants to assess their own changes on the basis of personal perspectives. This approach is good when a premeasure instrument might be intrusive or intimidating to program participants.

Comparing tribal statistics with national data. Many national surveys contain data disaggregated by ethnicity. In some programs, the data on Indians contained in these data banks might be usefully compared to tribal data on the same measures.

Finding a comparison reservation community that is willing to act as a "control group." However, if this method is used, it is important to negotiate

an understanding with the partner reservation so they are comfortable with the use of the evaluation findings.

General Advice to Evaluators. One of the guiding questions for this volume is, "How does better understanding of the role of culture improve evaluation practice?" Understanding the influence of tribal culture and context is critical when conducting evaluations in Indian communities. The goals of social services and educational programs are often twofold: help the individual student or client, and attempt to strengthen the community's health and well-being. Given this dual set of goals, indicators of success might not correspond to the dominant society's focus on individual achievement. These same values influence how tribal people view the role of researchers. Crazy Bull (1997) described these values in her advice to researchers who come into Indian Country: "We, as tribal people, want research and scholarship that preserves, maintains, and restores our traditions and cultural practices. We want to restore our homelands; revitalize our traditional religious practices; regain our health; and cultivate our economic, social, and governing systems. Our research can help us maintain our sovereignty and preserve our nationhood" (p. 17).

To ground the evaluation in the tribal community, a culturally responsive evaluator should learn as much as possible about its history, resources, governance, and composition. If possible, he or she should engage in community activities such as graduation ceremonies and dinners for the elders in the tribe, or funerals for honored tribal members. Engagement can also involve attending special events such as a Treaty Day celebration, powwow or tribal dance, rodeo or canoe journey. This participation can help the evaluator understand the context in which he or she is working. It also allows Indians in the community to build relationships with evaluators that are based on friendliness and respectful interest, rather than defined by strict roles and outsider "expertise." In fact, expertise in the form of education, degrees of higher learning, or professional reputation is of little value in Indian Country if the community does not see the evaluator as respectful and capable of understanding an indigenous perspective.

Building a strong partnership between the stakeholders and the evaluator and being willing to relinquish some of the power embedded in being "the evaluator" challenges long-held assumptions that an evaluator is to be impartial and distant from the program's operations. These assumptions are based on the need for objectivity in research and evaluation. However, partnership with the program being evaluated or with the community who are recipients of the program services does not imply that an evaluator loses the ability to remain objective. There is always some level of subjectivity influencing an evaluator's approach to her trade. This subjectivity is conditioned by the training and orientation (quantitative, qualitative, feminist, empiricist, critical, and so on) of the evaluator.

Evaluation methods that are responsive to community values and contexts are still objective in application if the evaluator and the program's stakeholders value learning from the evaluation. Situating evaluation methodology within an indigenous framework should result in creating this sense of ownership. Once ownership is created, the stakeholders value the knowledge they can gain from the evaluation—and evaluation is all about creating knowledge. When the stakeholders own knowledge creation, the evaluator can discuss negative findings (failure to accomplish goals, assumptions that appear to be incorrect) as well as positive findings. The knowledge becomes empowering, and evaluation is not viewed as merely a judgmental activity imposed by funding agencies or other outsiders.

By making the process of knowledge creation transparent and participatory, the evaluator builds evaluation capacity in tribal communities. It has been gratifying to be asked to review rough drafts of proposals in communities where I have conducted evaluations and see that they have included sophisticated evaluation designs using such terms as *theory of change, matrices of evaluation questions,* and *data collection plans.* It is also satisfying for an evaluator to become accepted and welcomed, not just for her trade but also as a friend and colleague in working toward the aspirations and sovereignty of the tribe. If the tools of the evaluator are used to fulfill the goals and aspirations of tribal peoples, then the evaluator has given back to the community, and not just come in to assess, monitor, and judge. She and the community have a sense of reciprocity—the final *R* in Christensen's model of elder epistemology.

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Evaluation Issues Relating to the Academic Achievement of Native American Students

NATIONAL SCIENCE FOUNDATION

SESSION 1: Evaluation Issues Relating to the Academic Achievement of Native American Students

Session Chair:

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Guiding Question

- The issue of the assessment of culturally diverse populations must be considered when promoting culturally sensitive evaluation. What are the specific evaluation issues relating to the academic achievement of Native American students? The discussion will highlight contextual factors, including rural vs. urban settings, approaches to high-stakes testing, test bias, test examinee preparation and best practices.

http://www.nsf.gov/pubs/2003/nsf03032/start.htm

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Papers/Presentations

On the Quest for Cultural Context in Evaluation: Non Ceteris Paribus - ∞ƳG £[1]

Eric J. Jolly[2]

Introduction

A part of the title for this paper was borrowed from my composite memories of early studies in Poperian logic, statistical systems and economic formulations, for they shared the belief that an operative requirement to making a causal attribution between intervention and outcome was "Ceteris Paribus" (an idiomatic construction). This roughly translates into "all other things being equal." The natural title for this paper, it seemed to me, should be the negation or "non ceteris paribus" – all things are not equal. I follow it with an old Cherokee saw my father used to repeat – they never were. My point is that although we are not entering new territory when we discuss the cultural context of educational evaluation, we are often rediscovering, as if for the first time, the power of cultural nuances to disassemble the expectations and tools of the majority when applied to the minority.

Indeed, there are some tools of evaluation that lose their integrity in the translation to other cultures and contexts, but there are many that don't. It is more often our assumptions that lose their integrity under the scrutiny of new cultural contexts. For example, what are the questions we need to ask, how do we ask them (and in whose idiom?) and how do we appropriately operationalize the indicators of success that we track? All of these are issues that evaluators should reconsider whenever we change the context of our work.

Evaluators working across cultural contexts are challenged to find the difficult balance between cultural sensitivity and stereotypic thinking. We do, after all, compute an ANOVA in the same way, regardless of who our clients are. If the methods of analysis are not different, then we are often left to consider modifications in our goals, intermediate variables, outcome variables and evaluation protocols. It is in these considerations that we must exercise great caution. If Native American students and White students are both going to use mathematics to design a bridge, shouldn't we hold them to the same high performance standards? As Hughes has eloquently pointed out, "There is no argument against the logic that individuals within these groups must develop the same body of skills and expertise that standards require" (Hughes, 2000, p. 12).

What is different in evaluation of Native American education programs is the issue of context. The experiences, traditions and problem-solving approaches vary widely across Native American communities, from each other and from the majority community. In reporting on its guiding principles for evaluators, the American Evaluation Association points out that their principles "were developed in the context of western cultures and…the relevance of these principles may vary across other cultures and across sub-cultures within the United States" (American Evaluation Association, 2002).

In this paper, I will briefly review some of the issues of context for Native American education and then examine their implications for our work as evaluators.

[1] On the Quest for Cultural Context in Evaluation: All things are not equal – they never were.
[2] The author would like to thank Patricia Campbell, Ph.D. for her review and suggestions on this paper.

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The Context of Evaluation: Who are We Measuring?

According to the U.S. Census Bureau (which identifies Native Americans as American Indian/ Alaskan Native or "AI/AN") the Native American population is about 1.5% of the total U.S. population or slightly more than 4 million people. Of those people identifying as AI/AN, nearly 2 out of 5 identify themselves as more than one race.

In the years between 1990 and 2000, the Native American population had a growth rate more than four times that of the White population (26.4% vs. 5.9%) and twice that of the total population (13.2%). This difference in growth rate becomes even more pronounced when you take into account multiple racial categories (U.S. Department of Commerce, 2001).

This high growth rate is one contributing factor to the noticeably different age distribution pattern among Native Americans: 33.9% of the population is under age 18 compared to 23.5% of the White population (Jolly, 2002). The average age of a Native American is 27 compared to 33 in the general population (U.S. Census Bureau, 1995, 2000).

This pattern among Native Americans, unusual for the United States, is due not only to a burgeoning youth population, but also to a relatively small elder population and low life expectancy. In 1995, 12.5% of the general population was age 65 or older, but only 5.9% of the Native American population was age 65 or older (U.S. Census Bureau, 1995).

The population profile of Native Americans is quite different from the general U.S. population in many other notable ways. The purpose of this paper is not to provide a detailed accounting of demographic variables, but simply to make the point that there are many differences in the daily living and learning experiences of Native Americans, especially when compared to the White population. The following are a few examples taken from Clarke, 2001; U.S. Census Bureau, 1995; U.S. Census Bureau, 1997; and U.S. Census Bureau, 1998:

- About 1 in 3 American Indians aged 15 and over reported having a disability[3] and 1 in 7 reported having a severe disability. For those age 65 and older, the ratio is 1 in 2.
- Nearly one third (31.6%) of Native American households live at or below the poverty level.
- 23% of Native Americans report that they do not speak English "very well."
- By percentage of the population, one third more Native Americans served in Vietnam compared to the "average" American.

Among youth aged 12 to 17:

- Illicit drug use is more than twice as high (22.2%) as the national average (9.7%).
- Binge alcohol use is somewhat higher (13.8%) than the national average (10.3%).
- Use of cigarettes is more than twice as high (27.2%) as the national average (13.4%).

[3] A disability is defined as difficulty in performing functional activities such as seeing, walking, lifting and/or functions of daily living such as bathing, eating and dressing. A severe disability means that these tasks cannot be performed without an assistant or at all.

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For youth aged 15 – 24:

- The death rate due to accidents is almost three times that for the total U.S. population and the leading cause of death.
- Suicide is the second leading cause of death with a rate 2.5 times as high as that for all races.

Given the relatively depressed health and economic context within which Native American youth live and learn, it should not come as a surprise that they also meet with less successful academic outcomes than their White peers. Although reports vary, it is estimated that nearly 50% of Native American students never finish high school (Indian Country Today, 1999).

The school experiences of Native American students vary widely depending on a host of factors. About one third of the students attend schools identified as "rural" by the National Center for Education Statistics (NCES, 2000). Another third are in large urban centers and the remainder is found in smaller urban and suburban settings. While in school, on or off the reservation, Native American students do not see many Native American role models in their classrooms. Nationwide, less than one half of one percent of new K-12 teachers are Native American and of those, about three fourths are women (National Education Association, 2002). Native American students do not find schools to be a source of inspiration either in teacher demographics and role models or in curriculum content and utility (Eberhard 1989; Tools for Schools, 1998). In addition, school is not a source of stability in many of these students' lives. One fourth of Native American students move and change schools each year (U.S. Census Bureau, 1995). As a result of these circumstances, students are not engaged and they are not achieving (Shutiva, 2001).

For many, the schools they attend are under-funded, either because they live in high poverty urban or rural areas or because they are attending schools under Bureau of Indian Affairs (BIA) operation. The BIA allocates $3,075 annually for each student and nearly 50,000 students attend such schools. Compare this with the $6,400 average per pupil expenditure of a U.S. public school (American Indian Education Foundation, 2002).

Native American K-12 achievement indices in schools do not match the national average on any standardized test. For example, while 28% of fourth-grade White students score at or above the National Assessment of Educational Progress (NAEP) proficiency level in mathematics, only 8% of Native American reach that level. By twelfth grade, the disparity is even greater with 20% of White (and 33% of Asian) students scoring at or above the NAEP proficiency level in mathematics and only 3% of Native American students doing the same. The percentage of Native American students scoring at NAEP's advanced level in mathematics is 0 (Campbell, Jolly, Hoey and Perlman, 2002)![4]

Of those who do graduate from high school, only 17% will go on to any form of college, compared with a national average of 62%. The Native American college population is predominantly female (60%) and is most likely to enroll in a two-year institution (50%) (Native American Public Telecommunications, 2002). The transition to, and success rates in, four-year institutions are quite perilous. At the time of the 1990 census, only 2.1% of Native American high school graduates had a bachelor's degree or higher (U.S. Census Bureau, 1995). The rate of graduate degree attainment is even lower, with the greatest disparities in the quantitative and scientific disciplines. For example,

[4] Individual Native American students do score at superior levels of math proficiency. However, the overall percentage is so small that it rounds to 0 percent for reporting purposes.

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in 1997 the National Science Foundation (NSF) reported only one American Indian doctorate in the field of computer science. Overall, Native American participation in quantitative and scientific disciplines is less than half of what would be predicted based on population (Commission on the Advancement of Women and Minorities in Science, Engineering & Technology, 2000; Campbell, Jolly, Hoey and Perlman, 2002).

Context and the Evaluation Plan

What is the purpose of presenting this highly selective thumbnail portrait of Native American life? Although the picture that it paints seems quite bleak, this is not intended to serve as an entry into the "Oppression Olympics." It is too easy for any sub-group to get lost in the pity of the portraiture rather than to frame these issues as challenges that must be accounted for in reform efforts. The demographic information presented above is simply meant to highlight some aspects of the context of evaluation, which we should take into account in developing our evaluation frameworks.

For example, take the statistics of Native American student mobility. When 1 in 4 students changes school each year, we may have to rethink the methodology for longitudinal studies. This mobility will impact how we collect permissions, work across different school systems and document non-continuous interventions, to name just a few core issues. Another example can be found in how evaluators respond to the high level of disability in the Native American community. Such issues as test accommodation, in terms of test modality (e.g., oral versus written), time (e.g., extended time or multiple sessions) and location (e.g., individual or group setting) must be taken into account in our evaluation and data-collection strategies.

As a third example of the importance of understanding context, we should consider the fact that 23% of Native Americans do not speak English very well and many speak a language other than English at home, often a language for which they do not have a writing system. This should impact the way that we phrase instructions and how we frame questions that are intended to assess some function other than English literacy. As Lena Canyon long ago pointed out, traditional adult-to-child instructions in the Native community include context-rich environments with verbal instructions augmented by a high level of gesture and other visual cues (Canyon, Gibbs & Churchman, 1975).

Taken together, these context variables create situations that challenge even the most seasoned evaluators. Canyon has documented how the cumulative effects of these differences can reek havoc on the best-formulated plans. As she reported on one evaluation effort, "supplies ran out unexpectedly or were lost; test equipment was broken; (and) factors not included in the evaluation plan were discovered late in the school year to have been important" (Canyon, Gibbs & Churchman, 1975).

There is much that can be done to assure the utility and appropriateness of an evaluation plan. The factors above and other issues of cultural context are not limiting factors; rather, they are a part of what will inform the whole story of our evaluation. They are also factors that might cause us to reconsider the appropriate place for cross-cultural group comparisons and even some standardized procedures since, after all, "non ceteris paribus."

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Missing Bricks

In most communities of practice or association there exists a foundational knowledge base that is presumed to frame the ideas and discussion among members. Within professional organizations, this shared knowledge base and communication style is often considered a "theoretical frame" and the argot of the profession are classified as "terms of art." In communities of association, much of this presumed understanding falls within the broader category of "local culture." In all cases, this notion refers to the assumed shared understanding of culture, context and experience that allows us to speak in an abbreviated idiom with certainty that the other understands both the stated and unstated intentions of our words and deeds.

When people from different professional or social communities meet, they are often very attentive to the challenges of crossing the cultures of their experience and will spend time exploring terms, their meaning and their underlying assumptions. As people become more familiar with each other's cultures, they begin to spend less time verifying the meaning and intent of their communication and more time speaking in what they presume to be their shared idiom. At this point, they have assumed that they share a foundation of common knowledge, experience and cultural understanding. In my work across diverse communities, I have become aware of one of the more interesting quirks that accompanies this assumed shared foundation of knowledge. I refer to these quirks as the "missing bricks" from this foundation of knowledge.

Let me illustrate. When I was a young graduate student and invited to my first cocktail party at a faculty member's home, I borrowed a tie, pressed my pants and headed off for the party determined to fit in. The first conversation in which I was engaged was absolutely painful for me. The discussion centered around modern European art and the work of a dozen artists whose names I did not know. I stood around smiling patiently, hoping desperately that someone would change the focus of the conversation to something I knew. Finally, my reprieve came when an esteemed faculty member turned to me and, changing the topic to food and fine dining, asked me what I thought of pollack. Having worked in a seafood restaurant during my studies on the East Coast, I thoughtfully proclaimed that I found pollack interesting, but sometimes a bit bland. As the conversation continued, I was a bit surprised that they were still discussing issues of art. It was perhaps six months later that it finally dawned on me that they had been discussing Jackson Pollock, the artist and not the fine fish. The fortunate choice of wording on my part allowed the "missing bricks" of foundational knowledge in this cocktail party community to pass undetected.

Since that time, I have encountered many instances in which I find myself working in communities where I have "missing bricks." They show up in misunderstandings about such things as community needs, demographics, goals and history. The misunderstandings may be about something as simple as understanding why Americans are so enamored by refrigerator magnets to issues as complex as the religious significance of an owl's feather. A critical challenge for evaluators is accepting the possibility that they too have "missing bricks." The challenge lies not in the identification of the obvious areas where we know that we lack deep cultural knowledge, but in the identification of those instances where we confuse "Pollock" and "pollack."

In cases where evaluations are being constructed, implemented and/or interpreted across cultural lines, evaluators must be especially vigilant in exploring the possible disconnects in foundational knowledge among those who are being evaluated, doing the evaluation and using the evaluation. The community whose programs are being evaluated must have a meaningful presence in

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constructing both the goals of, and the means to, the evaluation. Moreover, the community context must be clearly represented to those who will interpret the evaluation, its processes and outcomes to render decisions around program design and funding.

It is therefore incumbent upon the evaluator to examine the potential interaction of cultural context and evaluation activities. To do this, an evaluator must have a fundamental awareness of cultural norms and experiences of the people with whom he or she is working. Evaluators must develop an understanding of how these norms will play out in the context of evaluation instruments and protocols. And they must develop the skills to translate materials and represent data across cultural contexts so that the evaluation informs the process of reform in meaningful ways that can be addressed by the existing and emerging systems within the community.

Context and the Questions We Ask

Although we might not have different standards for performance-based outcomes, we certainly can and should frame the context of education reform activities within the cultural surround that helps define the essential elements for student success.

In organizing the research base for the report "Upping the Numbers: Using Research-Based Decision Making to Increase Diversity in the Quantitative Disciplines," Campbell, Jolly, Hoey and Perlman (2002) identified three broad factors that together describe essential elements for student advancement: engagement, continuity and capacity. These three elements collectively describe the features that must exist for every child to create a successful pathway for advancement in Science, Technology, Engineering and Math (STEM).

- Engagement requires an approach to STEM that includes such qualities as awareness, interest and motivation.
- Continuity requires institutional and programmatic opportunities that support advancement to increasingly rigorous STEM content.
- Capacity requires the knowledge and skills needed to advance to increasingly rigorous STEM content.

Individually, each of these features is not sufficient for advancement along the STEM pathway. For example, if the educational system is aligned for continued student advancement and the student has high interest in STEM but has failed to achieve the requisite skills to advance to the next level, he or she simply will not be able to advance. Similarly, if a child has succeeded in content mastery and the educational system supports his or her further advancement but the child has no interest, he or she will also leave the STEM pipeline. And finally, if the student has competency and interest but the system does not offer such opportunities as Calculus, AP courses and even information on colleges and financial aid when needed, then the student will not be able to advance.

This trinity of essential elements for student success can also help identify three essential areas of focus for an evaluation plan. An evaluator can ask and assess the degree to which a student is engaged in the field of study. An evaluator can assess continuity and congruence in the system that allows student advancement in the field of study. And, finally, the evaluator can assess the degree to which the student has attained capacity in the field of study.

The degree to which culture comes into play in evaluation varies across these three areas. For example, the means to "engagement" of a student are likely to vary greatly across cultures and the measures of engagement may also vary. Who we identify as role models, how we identify individual or group aspects of engagement and how we inspire students to find meaning in a field of study will relate to how that field is manifest in the student's community.

Identifying the cultural variability along the dimensions of continuity is a little more difficult. Here the evaluator needs to identify both the formal and informal systems of education and guidance that help students navigate the system. For Native American students, for example, the high school to college transition often involves an intermediate step through a community college system. In addition, many Native American students step in and out of college programs several times while in pursuit of a degree (McAfee, 2000). McAfee adds "stepping out" as an additional classification to our traditional construct of dropouts and matriculates. Here is an example of how we may need to reconsider an operational definition for traditional evaluation frameworks as we conduct research across cultures.

Finally, along the dimension of capacity, we should expect the same performance-based outcome for all students. However, the demonstration of that capacity may occur in differing ways. When assessing a student's capacity, we should be certain that extraneous factors, such as time orientation, language, or attitudes toward public versus private achievement do not undermine our assessment.

Conclusion

Coming to terms with the cultural context of educational evaluation challenges us to review the most fundamental assumptions about our work. We must understand and be responsive to the nuances of culture without lowering our expectations by creating measures that reinforce stereotypes. We are challenged to create situations that offer alternative ways to demonstrate capacity and that recognize skills when they are displayed in a culturally appropriate way. It is the evaluator's responsibility to gain a deep enough understanding of a culture to be able to develop tools and protocols that accurately reflect achievement of the goals of the educational programs. Within the Native American community, this can mean understanding and evaluating community, as well as individualistic, outcomes.

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Cultural Context and Evaluation: A Balance of Form and Function
Rosemary Ackley Christensen

"If we come out of it the second time and we've managed not to acquire some degree of understanding of our own foibles and insensitivities and misunderstandings, if we wind up in this exact same moment, then we're idiots. We ought to be able to learn."

> --*New York Times* (2000, June 11), p.18, by a New York writer telling how he learned to work with African Americans by listening carefully and using time wisely, so that after each time, working with each other got better.

Introduction/Background

Native American children in the United States still lack success in school achievement. Perhaps the wrong thing is measured, or the treatment provided lacks something still. Maybe our kids don't belong in these "white-man" schools. In the tribal schools, the children are also behind, at least in the ways in which the white man measures progress. Currently, education literature provides dreary tales of the achievement gap, with charts and data on Web sites. Possible success stories are not very lucid on whether minority students are actually a big part of any real accomplishment. A recent chart, *Raising Achievement,*[5] showed 17% of Native American fourth-grade children were at or above proficiency in reading compared to 40% of white fourth graders and 14% were at or above proficiency in math compared to 34% of white fourth graders.

Plainly, we need successful demonstrations and feasible blueprints that address and seriously consider the real world our students are in, a world where they are unable to measure up to the white man's standards and evidently are not successful in a traditional Indian world either. We Indian educators have been around for several decades now and educational achievement doesn't appear to be appreciably better, although it has not been for lack of trying many things.

Cultural Context

In an effort to make sense of a cultural context for evaluation purposes, at least four important concepts need to be discussed:

1. The Native American worldview is a holistic one[6] formed by Elder epistemology or knowledge, with core values stemming from this knowledge. These values, making sense in this worldview, form principles for living and functioning through oral tradition. This form of passing knowledge uses participation learning that reflects pattern thought (see for example, Ross, 1992; Diamond, Cronk & von Rosen, 1994; Thorpe, 1996; Martin, 2001;

[5] See www.NoChildLeftBehind.gov (accessed in May, 2002).
[6] "Native philosophy and religion, language, historical perspectives and contemporary approaches to life are holistic in nature. That is, Native thinking sees the world and its elements in a certain totality, with a whole-to-parts mode of consciousness. This high-level mode focuses on the whole pattern, the whole concept, the overall picture of the perception of stimuli. Relationships among the parts making up the whole pattern are intuitively felt, but are not specifically obvious nor important. Logical, temporal, factually detailed components of the overall perception do not command attention in themselves…" Manitoba native educators Margot Flanagan and Ellie Iverson in Diamond, et al., 1994, p. 8.

Cajete, 2000). The 3 "Rs" or principle behaviors that fit tribal education are respect, reciprocity and relationship. *Respect* is acceptable behavior between and among all living things. *Reciprocal behavior* forms a grid among living things on the Web of Life, which forms and builds *relationships*.

This world is holistic in nature (see, for example, Brown, 1988) and Indians live currently in a very linear world. The Academy, an important part of the white man's world, is linear and hierarchical in nature (see, for example, Wasson, 1973). Primarily, educational research projects currently funded by state and federal resources follow the form and function of the Academy relative to research.

2. The cultural context that reflects Native Americans includes a worldview, values and learning very different from that of the white man.
3. The holistic worldview concepts—participation learning, the core value of personal sovereignty, the grid behaviors of relationships, respect, reciprocity and the oral learning mode within natural circular and spiral teaching forms utilizing a group process—are teachable and learnable.
4. A culturally responsive evaluation plan assumes the item, object, thing or unit being evaluated will occur within a similar or somewhat similar cultural context as the evaluation plan.

Analysis/Reasoning Context

In looking at cultural context for evaluation, it is important to imagine and then understand certain situations in Native American culture. There are over 550 Indian tribes in the U.S. (Wilkins, 1997). Each is considered a sovereign nation by the federal government as defined by legislation (based on treaties) and case law. Many tribal languages are spoken, although these are rapidly being lost due to the overwhelming use and need for the English language. Each tribe has many differences from other tribes. Yet, it can be postulated that many if not most of these tribes share a common worldview, with life principles that fit this way of thinking. Many tribes look to Elders for tribal learning. Yet, within the holistic worldview, tribes are culturally different, one from another.

Due to the changes brought by the white man over several centuries, Indian people have suffered a great deal, yet they hold on to certain aspects of a remembered past. They live, work and play as Americans, with many attending the same schools as other Americans. The Elders and scholars, however, speak to and worry about the damages suffered to a traditional way of life (see for example, Thorpe, 1996; Gulliford, 2000; Tinker, 1993; Cook-Lynn, 2001).

In order to understand, learn and ponder a common cultural context useful for responding to a Native American perspective, it is helpful to consider the state of Indian education using ordinary measures, gain a normal understanding of suitable cultural contextual attributes held by Native Americans and juxtapose these characteristics with what evaluations usually use for these traits in the current educational framework. The state of Indian education can be best understood through a brief discussion of the achievement gap. Commonly held cultural norms are briefly discussed. A widely held notion, internalized oppression, is useful in understanding intertribal relationships, Indian students' discontent and that of Indians with other Americans. Research as a construct is

discussed from an indigenous perspective. And the Indian educational leadership, a group frequently asked to lead activities for real change, is itself put in perspective relative to these issues.

Minority Achievement Gap Issues

The achievement gap appears to defy researchers to this day, according to reports that point out the lack of a definitive explanation for the gap but are able to offer theories as to why the gap exists.[7] Reasons provided include poverty, non-challenging academic coursework, peer pressure (to not do well), student turnover, parenting (looking for differences in parenting of kindergartners), less access to preschool, teacher quality, stereotype threat (having to identify race in tests and other academic tasks), teacher expectations, television, test bias and genetics (Viadero, 2000). Some of the more successful program concepts or plans to lessen the gap deal with: I) the effects of poverty (and or effects of race bias), 2) teacher training, 3) parental involvement, 4) motivational constructs, 5) emotional treatment (bonding with student by an adult that creates a trusting relationship), 6) preschool and/or early childhood programs, 7) class size limits and 8) various curriculum efforts that fit with one or more of the above. A study by RAND (Grissmer et al., 2000) indicates that ten states led by Texas have seen steady improvement on minority students' tests in math and reading for approximately a decade. The solution appears to contain state standards, tests by grade, adequate resources for teachers, lower pupil-teacher ratios and subsidized pre-kindergarten (Education Week, 2000).

A plan/design for looking at the gap problem, researched and written for a Wisconsin State organization (Christensen, 2000), centers on the process, encouraging districts to utilize forms that are more apt to provide comfort to minority groups than the currently utilized linear model reflecting popular majority culture. The particular process used in this design reflects a more holistic world in tune with minority worlds although projecting that no harm will accrue to the white linear world student. Districts are encouraged to work in groups, infuse some holistic ideas, take advantage of sharing some costs and realize that districts share similar problems that can be worked on together in a more efficient, cost-effective way.

Recently, a district in northern Wisconsin agreed to work toward understanding why it and a nearby reservation were feuding in public. The Indian Nation had asked the Office of Civil Rights to intervene. The district had asked the State Department of Public Instruction to give counsel and advice.[8] In the spring of 2000 this problem was being worked through, with a long-term solution being sought by the district. In several days of talking to Indian community members it was clear that the Indians and the school district did not understand each other. District personnel spoke to the need to treat everyone in the same way. The Indians reported that their kids said that they were ignored, not allowed to participate as the 'stud' jocks did, and that they did not like school. In a short-term solution,[9] district personnel agreed to a full-day dialogue where they discussed how Indians differed in their way of life from the non-Indian community. A long-term solution offered to the district speaks to the achievement gap and suggests faculty and staff learn cultural

[7] Viadero, D. and Johnston, R.C. (2000, April 5). Lifting minority achievement: complex answers. *Education Week*, four part series on the achievement gap.
[8] Department of Public Instruction, State of Wisconsin. Letter dated Feb. 19, 2002, to school district superintendent.
[9] Based on Christensen, R.A. (2002, March). Exploring connections between the Indian reservation and the school district: a meta-plan for collaborative action. Unpublished document.

competencies relative to Native Americans, how teaching methods can be amended to include behaviors more attuned to a holistic worldview and that Indian students be provided assistance/ strategies in understanding and coping with the concept of internalized oppression.[10]

A northeastern Wisconsin school has agreed to work on the achievement gap problem by looking at a cohort group beginning with the first grade and following it to the eighth grade. This effort is to begin in the fall of 2002. The district will make an effort to measure how its interventions meant to lessen the achievement gap actually make a difference (or not). Meanwhile, the district will look at ways it can learn about and work with its minority community toward lessening the achievement gap. Prior to this agreement, the district did not know how the same students did from one year to the next (that is, the same group of students that received programs meant to help them achieve success). The district is working with a community advisory group.[11]

The three tribal "Rs" of respect, reciprocity and relationship are the grid in the frame of the design plan. This allows usage of the bonding method with students, a strategy that uses respect between teacher and student as a base premise (mentioned in the gap literature). This cultural context needs to be part of instructional program coherence (IPC) within schools. Newmann et al. (2000) define IPC as "a set of interrelated programs for students and staff that are guided by a common framework for curriculum, instruction, assessment and learning climate and that are pursued over a sustained period" (p. 297). They suggest that IPC may make a difference in school improvement.

On the Navajo reservation in the Arizona desert, in an oral interview,[12] Bobby Wright, formerly with NASA, explains his successful math curriculum on building sheep corrals and making turquoise jewelry. Mr. Wright is using a simple but effective concept: that to reach his students he must build on local knowledge that makes sense after school is finished. Called by some "building on the local," and by others, constructivist pedagogy, it is a strategy that works for those that try it. The National Council of Teachers of Mathematics (NCTM) recommends the use of constructivist pedagogy (NCTM, 1989). They recommend this curricular approach because math is used in ways that students can relate to the real world, the way they think and that they will use for lifetime purposes. Obviously, if children come from a different cultural environment, their world will be reflected in this approach.

Two Elders in the Stockbridge-Munsee woods of Wisconsin provide assistance to school districts and others in understanding cultural difference. They encourage sharing of ideas, building opportunities for cooperation and solidarity and most importantly "enabling groups to translate thought and ideas into action."[13] Using Elders to assist those who want to learn is a fine traditional method and reinforces the notion of community that is so valued by Indians. It is clear that U.S. society is still considered a racist society, in itself a problem when addressing minority successful education. The two women teach thoughtfully about racial bias by working in groups through the use of a *bias bag* to understand and appreciate how racism works.

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[10] See Christensen, R.A. (2002, May). A long-term plan for a school district, including a report of short-term effort. Unpublished document.
[11] *Minority Student Achievement Sub-Committee* notes by member R.A. Christensen, 2001-2002. Hand-written notes, letters, minutes from school district, unpublished documents.
[12] Interview at the school while R.A. Christensen was on a site-visit, 2000. Hand-written notes, unpublished document.
[13] Quote from Ruth Gudinas, July 2000. Full Circle is the name of the partnership that includes Elder Dorthy Davids and is located on N9136 Big Lake Road in Gresham, WI 54l28.

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The *New York Times*[14] spent a year examining racial issues, noting in the series that, "Race relations are being defined less by political action than by daily experience, in schools, in sports arenas, in pop culture and at worship and especially in the workplace."[15] As Susan Kepecs said, quoting a member of the Latino community in Madison, Wisconsin, "people need to see themselves reflected in the social fabric" so kids spend two years immersed in Latino cultural events sponsored by the Madison Children's Museum.[16]

Any good plan will use and encourage various levels of evaluation built into strategies that make sense and are useful to the districts and organizations over time. To make it culturally relevant to the group studied is another matter. It is important to monitor the fit of the treatment with the population treated, especially a minority population. For example, a district may welcome and encourage many teachers to join in teacher training programs, but may not ascertain through adequate monitoring or evaluation whether the training actually affects instruction in the classroom for the sample group. Usually, too, the teachers are not tracked, so they may get the same initial information over and over again. Frequently districts use "opinion-airs" as evaluation measures for training efforts.[17]

Oral research/resources provide an entrée to the cultures of many minority groups. It is logical to use oral elder knowledge to establish and document a suitable cultural context. Respect is established from this form of documentation and comfort is provided to the student through this process. One is also able to access the wisdom and knowledge of elders that may be denied a researcher by using only written literature.

Indian Educator Leadership

Winds of Change, the publication of the American Indian Science & Engineering Society (AISES) recently featured a discussion of leadership development in Indian country.[18] The question posed was, "*Where are the new Indian leaders*? " Gerald Gipp (Lakota, Standing Rock) discusses leadership paths in the decades of the sixties and seventies.

"During this time, pioneering graduate degree programs at Pennsylvania State University, Harvard University, University of Minnesota and Arizona State University were successful in providing academic training to a critical mass of American Indian students… What appealed to me most was the opportunity to go to a major university and to take advantage of the resources there. It created a network of Indian people, not just those at Penn State but those in other programs as well. We were encouraged to get together with the other programs. We really got to know each other" (p.15).

Gipp explained that changes started to occur in Indian education, led by people from these programs. "Shortly after the programs began, we saw these changes—reform in Indian education, reform in self-determination, issues of school control—all these legislative efforts were led by people from the programs. They took the leadership roles" (p.16).

[14] How race is lived in America, a 5-week series. *New York Times* (2000). (www.nytimes.com)
[15] Scott, J. (2000, June 11). *New York Times*, p. 17. Fourth article in series.
[16] Icaliente in the culture. (2001, June 23-29). *Isthmus* 25(25), pp. 15-16.
[17] Based on collected evaluation sheets from district(s) training efforts for minority populations where respondent is asked how something was liked on a scale of, for example, one to ten.
[18] *Winds of Change*. (2002, Spring). 17(2), p. 15. AISES, 4450 Arapahoe Avenue, Suite. 100, Boulder, CO 80303.

Deloria and Wildcat (2001), in speaking about involvement by Indians in education and the notion of cultural difference, say that the "thing that has always been missing in Indian education, and is still missing today, is Indians. In spite of the many advisory committees, national organizations and graduate programs in education that purport to deal specifically with Indian education, we see nary a trace of Indianness in either efforts or results" (p. 152). Deloria says that he may offend Indians that serve in these national organizations and committees, but it is his opinion that, "they generally leave their Indian heritage behind and adopt the vocabulary and concepts of non-Indian educators and bureaucrats, following along like so many sheep" (p.153). He states a mistake these Indians make is believing that "in adopting the technical language of modern education they are making Indian needs relevant to influential people who can help turn Indian education around" (p.153). Deloria talks about cultural differences by beginning with the fact that there are many cultural differences that exist between Indians and non-Indians. He selects several items (beginning with how Indians compete) to illustrate his point, acknowledging that various behaviors and effects could be used as illustrations.

He speaks about tribal elder knowledge, oral tradition and the Indian holistic worldview "where the parts and their value are less significant than the larger picture and its meaning" (p.155). He makes a case for using the cultural methods and techniques of tribal elders as non-Indian techniques and methods have certainly "proven themselves failures" (p. 154). He makes fun of current techniques passed as Indian. "If the child wants to understand the whole, we simply dress up the parts in buckskin and pretend that we have answered the problem" (p.155).

Community Involvement

Szasz (1999) in her "Indian Voice" chapter 16, discusses Indian educators concerned with involving community by using the example of their activities during the White House Indian Education Conference in 1995. She quotes John Tippeconnic (then director of the Bureau of Indian Affairs (BIA) Office of Indian Education Programs) stating that, "Tribes should determine what is taught to their children" (p. 226), which she says reflects Tippeconnic's experience in "years of dealing with the contending forces in Indian education, the tribal governments and the community and professional educators" (p. 229). She views these educators as having developed a network that was effective and efficient by the 1990s. They traveled to conferences, served on various organizations, were readers for federal agencies that granted funds to Indian tribes and organizations, staffed offices and led agencies in Washington, and as she says, their activities "enabled them to mobilize with considerable strength when confronting those crises that appeared with increasing frequency during the 1990's" (p. 203).

Tribal educator and Director of the Menominee (WI) Tribe's language project, Alan Cauldwell (Menominee) speaks frequently to the need for indigenous community action. He sketched for other discussants at an educational meeting in Oshkosh, Wisconsin in March 2002 his notion of what is important: community involvement or Indigenous Community Action (ICA). ICA uses the medicine wheel frame with four quadrants. In the upper left are the words, "Power" and "Grandmothers," in the upper right, "Strength" and "Warriors/Veterans," in the lower left, "Knowledge" and "Indian Educators" and in the lower right, "Leaders" and "Mothers." Community change is possible when the right forces are recognized and brought together to make change for the children, using power, strength, knowledge and leaders.[19]

[19] Cauldwell sketch, unpublished document, no date. Obtained March, 2002.

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Internalized Oppression

An important issue to consider regarding cultural context in education is the premise of internalized oppression. Durán and Durán (1995) (see also Fixico, 2000, chapter 2[20]) begin their section on internalized oppression with a discussion of the coercive boarding school public policy of the United States. The policy removed Indian children from their families and their education through tribal knowledge, by trickery and deceit. Durán and Durán (1995) explain how this policy and other policies of the federal government were policies of oppression:

"Once a group of people have been assaulted in a genocidal fashion, there are psychological ramifications. With the victim's complete loss of power comes despair and the psyche reacts by internalizing what appears to be genuine power—the power of the oppressor. The internalizing process begins when Native American people internalize the oppressor, which is merely a caricature of the power actually taken from Native American people. At this point, the self-worth of the individual and/or group has sunk to a level of despair tantamount to self-hatred. This self-hatred can be either internalized or externalized" (p. 29).

Anishinaabe Elder Lee Staples, in his work with youth, elders and community, has taken the notion of internalized oppression (IO) and worked with it in both his native Ojibwe language and in English. He says that until Indians learn, work with and understand the effects of internalized oppression, we will not be happy or successful with the results of our educational efforts (Staples, 2002). It has become part of our cultural background and we must deal with it. He has extensive experience functioning with Indians and non-Indians on this issue. He developed and works with a cognitive map, *Cultural Continuum: A Diverse Path*. Knowledgeable in his oral tradition and language and experienced with skills acknowledged by Ojibwe-first speaker elders, he works as a Native psychologist unfettered by the academy's degree structure or over-confident approach. He consults with the University of Minnesota, Duluth Social Work Department Native American Project, Cultural Language Institute and is Consultant and Cultural Advisor to the Chief of the Mille Lacs Band of Ojibwe Indians (Minnesota).

Conversant with Durán and Durán and with other materials available from the Internet and the usual sources, Staples works with oral lessons from elders. Ojibwe is his first language; he understands clearly and is growing in strength and knowledge of oral tradition. He explains how internalized oppression works among Indian people, giving examples that illustrate how we show hostility and anger toward other Indians based on perceived slights, insults and implied criticisms. As cultural director of a current language project in Ojibwe country, he is advising project personnel to learn about internalized oppression, discuss its effects during project meetings and investigate strategies for minimizing these effects, so that a project evaluation will reflect a successful project and that something in the nature of new knowledge that might help other projects will occur. He and others have come up with a way to keep track of IO effects on the project.

[20] On pp. 26-42, he has a chapter on stereotypes and self-concepts, illuminating the issue of internalized oppression, and he describes and discusses the problems that impede progress.

Tinker (1993) says:

> "Internalized racism (resulting in a praxis of self-hatred) [should] surprise no one. The phenomenon is part of a much broader process that can be seen in other aspects of human existence. Just as an abused child slowly but inevitably internalizes a parent's abuse as a consistent demonstration of the child's own shortcomings and may even regard the life of the abused parent as exemplary, so communities of oppressed peoples internalize their own oppression and come to believe too many of the stereotypes, explicit and implicit, spoken by the oppressor" (p. 3).

A *Winds of Change* article[21] quotes Norbert Hill, Oneida (WI), "I learned long ago that Indian leaders have to withstand the bullets in the front and the arrows in the back. We take arrows in the back when Indian people shoot at us. If we could learn to turn to each other rather than on each other, the bullets from mainstream society would not affect us as much" (p. 17). The article speaks to the young people viewing leadership as a vehicle "to invite harsh personal criticism and hostility from their own people. They allude to the phenomenon of internalized oppression…" (p. 17).

Durán and Durán (1995) invite Indians to seek our own way of doing things: "The legitimization of Native American thought in the Western world has not yet occurred, and may not occur for some time. This does not mean that the situation is hopeless in the Native American community. The Native American community can help itself by legitimizing its own knowledge and thus allowing for healing to emerge from within the community. If the perpetrators prefer to live in denial, that is an issue with which they will have to deal presently and historically" (p. 53).

Indigenous Research Issues

Smith (1999), in her discourse on indigenous research, discusses research and its progeny. She observes how research that is known and practiced today is actually part and parcel of European colonialism. It reflects the European worldview and values. She advocates activities to decolonize research methods. The models (Graham Smith, p. 177) discussed echo the cultural mode of the indigenous person. Research defines legitimate knowledge (p. 173). And evaluation, a natural issue/offspring of research, has two reasons for existing, according to the User-Friendly Handbook (NSF, 2002): it 1) provides information to improve, and 2) provides new insights, or new information that was not anticipated (p. 3). Smith says research methods should ensure the problem has an appropriate set of research strategies and that the information sought "is accessed in such a way as to guarantee validity and reliability. This requires having a theoretical understanding, either explicitly or implicitly, of the world, the problem and the method" (p. 172). She says it is important in a cross-cultural context to ask important questions:

> "Who defined the research problem?"
>
> "For whom is this study worthy and relevant? Who says so?"
>
> "What knowledge will the community gain from this study?" (p. 173).

[21] Passing the torch. *Winds of Change*. (2002, Spring).

It is useful to search for research theories that are flexible enough to accommodate cultural differences. There are sufficient materials, for example, on grounded theory that will help researchers in this regard.[22]

Cultural Context is a Sense of Place

Finally, we must be cognizant of our sense of place. Cajete (2000) explains, "the psychology of place"(p. 187). He explains how Indians fit into Turtle Island and how Turtle Island fits into them. It is the cultural context of Indian country. He says, "Indeed, this perception is reflected throughout myth, ritual, art and spiritual traditions of Indigenous people everywhere because in it is a biological reality. All human development is predicated on our interaction with the soil, the air, the climate, the plants and the animals of the places where we live. The inner archetypes in a place formed the spiritually based ecological mind-set required to establish and maintain a correct and sustainable relationship with place" (p. 187). In an earlier book, Cajete, from Santa Clara Pueblo (New Mexico) explains this sense of place in the Web of Life as the seventh sacred direction.

The concept of wholeness and what it means in the contemporary world is difficult, especially when we find ourselves in a very linear world organized by Euro-Americans. We are all taught in school to believe that only the linear, hierarchical world is sensible. Kincheloe et al. (1998) provides a discussion on whiteness in a similar way that racism as a subject is studied. A teacher writes a particular chapter about the three stages she went through as she developed into a teacher, with the first stage, "the white savior." Whiteness, the authors say, defines the Academy's practice as much as any other indicator.

Conclusion

Wholeness characterizes, frames and defines a culturally different world. It is a traditional Native world where the parts fit into the whole, where motion is circular, activities spiral to and from the center, and every living thing is related. "*Mitakuye Oyasin*," the Lakota say to end their prayers, to greet and to say farewell. Cajete (2000) says the phrase identifies and explains community (p. 86). It is the context within which we live and work. It is what we strive for with all our being. It is inclusive rather than exclusive, seeking to fold everyone into a relationship, one that ensures that all living things are in balance. Brown (1982, p. 71) notes that Native people "generally do not fragment experience into mutually exclusive dichotomies, but tend rather to stress modes of interrelatedness across categories of meaning, never losing sight of the ultimate whole." The beliefs, philosophy, epistemology and oral tradition found in a holistic world will be reflected in its educational practices, learning and teaching pedagogy and interrelated activities with others.

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[22] See for example, Glaser (1967). Brief, more recent articles are available on the Web, for example, Urquhart, C. (2000), Strategies for conversation and systems analysis in requirements gathering: A qualitative view of analyst-client communication. In *The Qualitative Report* (2000, January), 4(1/2). (http://www.nova.edu/ssss/QR/QR4-l/urquhart.html)

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Discussion Highlights
Grayson Noley

These two interesting papers by Dr. Jolly and Dr. Christensen are intended to contribute to the debate surrounding issues of achievement and how achievement should be measured, a task both papers certainly accomplished. The concerns held by those who evaluate programs intended to improve Native American children's achievement were listed and discussed, although the conclusions reached or implied mostly rely on "common sense" rather than empirical research. In reality, it appears that the errors made by those who reach conclusions about the academic problems faced by Native American children begin with common misunderstandings. These would include, for example, not accounting for issues related to language, poverty, culture, etc., when aggregating data and identifying achievement deficiencies and planning for interventions. To the credit of the authors, they do not propose to give definitive answers but rather seek to give more insight into a quest for a better definition of the question.

Professor Christensen's paper begins with a list of speculative conditions that are believed to lead to the so-called achievement gap. This list, while perhaps not exhaustive, is extensive. It describes conditions that affect both Native American children and the institutions that purport to serve them. These are the conditions that are unpleasant in their realization, such as poverty, prejudice and lack of opportunity among others and are not new to those of us who are long-time observers of Native American children and American education. These are conditions that cannot be ignored in the explanation of lower achievement levels of some Native American children, yet they also are conditions that can lead to other devastating assumptions that, in turn, can also contribute to poor self-esteem that results in underachievement. This is an important issue to which I will give more attention later.

In addition to the social context introduced above, Professor Christensen also calls attention to the need for observers to understand that there is a cultural context to which they should draw their attention as well. She points out that understanding the differences between the context in which Native American children find themselves may be as simple as understanding the dichotomy between the world views of Native Americans and non-Indians. Native American children live in the linear world of the non-Indian and this is in conflict with the holistic world of Native people. This conflict is viewed as a major contributor to the academic issues faced by Native American children in American schools. This may be exacerbated by the large number of Native American tribes/nations that continue to maintain their own cultures and languages. That is to say, in addition to the differences Native American children find within the majority population, they also find differences among themselves. This is supported in another critique of the contexts in which research and evaluation focusing on Native Americans occur (Fleming, 1992).

Professor Christensen also gives attention to curriculum delivery models that will enhance learning opportunities for Native American children, strategies that focus to some extent on demonstrating respect for the children and their cultural grounding. She also refers to the utility of role modeling in schools exemplifying these strategies by describing a teacher whose success is credited to his ability to create a bond with his students.

What do these concerns have to do with evaluation? I hope the answer to this question is obvious. If it isn't yet, then critical attention to Dr. Jolly's paper should bring it into better focus. This paper focuses on developing an understanding of cultural context, similar to the conditions

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Christensen listed as leading to the existence of the so-called achievement gap. We probably ought to call the discrepancy in scores for one race/ethnicity as opposed to another a failure on the part of the institutions charged with the responsibility to serve all students equitably.

Dr. Jolly stated that in the discussion of a cultural context for educational evaluation, "we are not entering new territory." It is not difficult to find agreement here. I was asked recently by an undergraduate student in our teacher preparation program how much time should be devoted to teaching about diversity in the classroom. I told her that *all* her time should be spent in such endeavors. There is a diversity of ethnicity, race, custom, tradition, music, dance, ways of knowing and yes, culture. To be American is to be diverse. This is the American context. Unfortunately, we fail to exhibit our understanding of this diversity in certain places, but the one place we should not fail is in school and when assessing what students do in school.

Americans are accustomed to working across diverse cultural constructs. It is just that the diversity with which white Americans are most accustomed and what they understand most is the diversity found in European-American cultures. What they consider to be different is Native American cultures and those of other minority populations in this country.

Dr. Jolly, like Professor Christensen, describes conditions that are important in knowing about Native American people. It is, of course, important that evaluators, teachers and others understand the contexts in which Native American children are situated, as was already pointed out by Christensen. However, we have to be careful about this. For example, Jolly lists poverty, but while it might seem to be true, not all Native American people are poor. He describes a high growth rate of our population, yet not all Native American families are exceptionally large. He describes other demographic characteristics as well, but one must be careful to understand that the children in American classrooms are not statistics. They are individuals and deserve to be treated as such. Inadvertent stereotyping is a serious problem.

Concerns raised in the discussion among the workshop participants centered around methodologies used by evaluators for collecting data, how judgments are made and what cultural understanding contributes to the conclusions reached. Questions were related to how one knows if a relationship actually exists between the Native American learner and the teaching method utilized. Is it really clear that there is an interface between the learner and the teacher? Are they talking the same language but engaging in the concepts with different imagery? Is the context in which things are being done perceived in the same way by both evaluators and subjects? These are questions that must be considered when making judgments about the performance of children in any area of learning. Evaluators need to have cultural understanding to be intellectually prepared to deduce the true meaning of the performance that is documented.

At the same time, there are questions about whether the effect of evaluation ought to be judgment at all. The discussion suggested that when a child sits down for a discussion about his or her performance in Native American cultures, what transpires is not judgment but rather instruction on how to turn a weakness into a strength. It is a way to help the child grow. The act of making judgments, it was suggested, is perhaps the wrong objective. Instead, evaluation should help make positive changes in the direction undertaken.

It appears that the latter recommendation suggests that all evaluation should be formative in nature. Indeed, it is the attitude taken by many evaluators that their mission is to help a program improve. This means, for example, that they would seek to identify ways in which individual

student performance might improve, instead of merely telling the program staff that the student's performance is deficient. This is desirable without a question, but it was also suggested that sometimes summative evaluations about a program's effectiveness should be made. For example, there are instances when one wants to know if, at the end of an intervention, the desired results emerged.

This, then, is the challenge confronted by evaluators. They need to be cognizant of the context in which teachers must educate and take into account the issues that have an effect on the achievement of some children, yet they cannot let the school and its teachers "off the hook" by providing them with an excuse for the poor performance in their institutions. Also, they cannot stereotype Native American children in their zeal to "understand." Giving educational programs excuses for not providing the best services for Native American children does no one any good. Instead we must advocate for appropriate solutions for poor performance wherever it occurs.

Some readers may be familiar with a book called *A Framework for Understanding Poverty* by Ruby Payne (1998). I think it is unfortunate that some faculty in teacher preparation programs have endorsed this book and offer it as required reading. My personal assessment of the book is that it does little more than stereotype people in poverty and give rich white people the illusion that they understand those who are impoverished. In my opinion, it is a primer for snobbery and makes those who are not forced to live in the worst possible human conditions grateful for their privileges. We have to be careful that we don't follow the same path in our quest to find better ways to evaluate programs that address the academic performance by children of poverty. We have to avoid allowing children to be stereotyped and should put the onus on the programs serving these children to do a better job. We also must educate our politicians who sit on thrones of power, offer undocumented criticisms of schools and put forth ill-conceived policies intended to punish those who don't perform according to their weak measures. Instead, they should give them resources. Resources such as teachers who are prepared to confront the various contexts of education.

I criticized a regional university in Oklahoma a number of years ago for its lack of attention to the conditions that existed in its area, *its* context. I told the dean that the institution had existed for approximately 100 years and had delivered a teacher education program for all those years in an area that was documented as being one of the most poverty-stricken areas of the country and that also had one of the largest populations of Native American people in the country. The teacher preparation program had never taken note of its own context sufficiently to address it in course structures. In spite of the fact that it prepared teachers who, for the most part, would never leave that area, the university never offered a class devoted to the preparation of teachers who would be asked daily to meet the challenges presented by poverty and diverse languages and cultures. For all those years, the program missed the opportunity to give American schools these human resources.

Who, or what, are we evaluating? Are we evaluating the students or the programs intended to serve their educational needs? The answer should be no mystery. We are evaluating the educational programs. Should we take into account the context within which the educational programs are delivered? Of course. That context includes the economic conditions from which the students emerge, the cultural milieu, the geography and the relative mobility of students, among others. Should we take into account the diversity of resources available to American schools or lack of such resources? Certainly we should. Should we reward schools merely for their students' high performance on test scores? Certainly not. That serves to punish certain schools and

teachers for their lack of resources and for the school's perceived failure even when there may be successes such as Dr. Bobby Wright's successful math classes, as cited by Professor Christensen.

I think the message given by these two papers is that we must pay attention to the diversity presented, but not by punishing or criticizing those who are being served and not by providing the institutions with excuses for their poor performance. Instead, we need to find ways to *help institutions to do a better job* of serving the American children in our schools. Some of these ways might be similar to those described by Professor Christensen. At the same time, it is important to point out that it is a disservice to always link Native American children with poverty. Although many Native American children are victims of poverty, not *all* are, and if they have difficulties in school, their problems may be linked to culture.

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Researching Ourselves Back to Life

9

RESEARCHING OURSELVES BACK TO LIFE

Taking Control of the Research Agenda in Indian Country

◆ Joan LaFrance and Cheryl Crazy Bull

Here comes the anthros.
Better hide your past away.
Here come the anthros on another holiday.
And the anthros bring their friends to see the circus watch the show
And when their pens are dried they pack their things and away they go

—Floyd Red Crow Westerman[1]

More than 30 years ago, a well-known husband and wife anthropologist team noted that in their profession they had studied American Indians more than any other group in the world

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(Swisher, 1993). The myriad of research done by social, health, and medical researchers is problematic to many American Indian people whose tribes and families have suffered from a long history of intrusive studies that have built the reputations of anthropologists and other researchers but brought little more than the loss of cultural ownership and exploitation to Indian people. Vine Deloria Jr. (1969), in his trail-blazing book, *Custer Died for Your Sins*, was among the first to denounce the invasion of arrogant researchers pursuing their own agendas and using Native peoples to promote their careers. His chapter on "Anthropologists and Other Friends" inspired Floyd Red Crow Westerman's song "Here Come the Anthros." However, as tribes assert their authority and lay claim to their own agendas, it is no longer a "holiday" for researchers in Indian Country.

In this chapter, we discuss this changing landscape and ethical considerations that need to be taken into account given the shift toward tribal control over what research is done and how it is done. We briefly outline the movement to take control of research agendas and describe the various processes being used in tribal communities to review and regulate research in Indian Country. However, ethical and culturally responsive research requires more than attending to regulatory dictates. Throughout the chapter, we share the experience and reflections of both Indigenous and non-Indigenous scholars regarding lessons learned in conducting research that is respectful of Native cultural mores and responsive to community priorities. We conclude our discussion by examining how research practice informed by Indigenous ways of knowing challenges Western epistemologies and methodologies (in which most of us have been trained). Our discussion focuses primarily on tribal communities in the United States as that is our direct experience.[2]

Although most of our discussion describes our experience in the United States, the history of exploitation and abusive research practices is not unique to American Indians. Nor is the growth of formalized processes to guide research among Indigenous peoples limited to the United States. In Canada, researchers must submit their proposals to Research Ethics Boards that follow the "Tri-Council Policy Statement" (TCPS) for research. Section 6 of the TCPS directs researchers to a number of documents that outline ethical guidelines for working with First Nations and Aboriginal communities. Noting that in Canada, and elsewhere, Indigenous peoples have "distinctive perspectives and understandings embodied in their cultures and histories," the policy statement "recognizes the international consensus that has developed over recent decades that Aboriginal Peoples have a unique interest in ensuring accurate and informed research concerning their heritage, customs and community" (Canadian Institutes of Health Research, 2005, sec. 6, p. 6.2).

In 1998, the Health Research Council of New Zealand issued *Guidelines for Researchers on the Health Research Involving Maori*. The guidelines are intended to inform researchers about when consultation is necessary and processes to use to initiate consultation with Maori. The document notes that one of the purposes of the guidelines is to "ensure that the research outcomes contribute as much as possible to Maori health and well-being, while the research process maintains or enhances mana Maori" (Maori authority or power; Health Research Council of New Zealand, 1998, p. 3).

In an address to the Canadian Evaluation Society, Marlene Brant-Castellano, co-Chair of the Royal Commission on Aboriginal Peoples (RCAP), told a story of her experience at a special meeting of the RCAP to solicit feedback on the content of a proposed research program. The entire first session was spent facing criticisms of research, with many echoing the statement, "We have been researched to death." An elder who listened for a long time, offered the following observation: "If it is true that we have been researched to death, maybe it is time we started researching ourselves back to life again" (Brant-Castellano, 1997, p. 1). The

elder's wisdom reveals the importance of research in our communities while recognizing the essentialness of self-determination. It is in this spirit of "researching ourselves back to life" that we write this chapter.

◆ *Arguing for Change*

Research in Indigenous communities faces the challenge of whose voice is speaking with authority about Aboriginal experience and in the validity of information—both the reporting of facts and their interpretation (Brant-Castellano, 1997). Over the years, Indigenous writers have argued the importance of building capacity among Indigenous researchers and shifting research agendas. In 1977, Joseph Trimble, a Lakota researcher, described himself as a "sojourner," a lone voice attempting to sort through the American Indian community needs and the agendas of researchers. In a review of articles on Indian educational research, he found that most of the literature concentrated on problems centered on the investigator's interest and not on those of the tribal people from whom the data were obtained. Often these research studies depicted Indians in a naive or negative light (Trimble, 1977). LaFromboise and Plake (1983) noted the need to increase the number of American Indian researchers and expand community participation in research. In 1991, the *American Indian Quarterly* dedicated an issue to research in Indian Country. Wax (1991) described many of the ethical problems inherent in conducting research in Indian communities, including the incompatibility of worldviews; the varying views of ethics and science; and issues of membership and individual autonomy, and disclosure and informed consent. V. Deloria (1991) argued that researchers needed to focus on real needs in Indian communities and minimize useless research. In a 1993 interview published in the *Tribal College Journal of American Indian Education*, John Red Horse, Professor of American Indian Studies at the University of Minnesota, described the need for stronger control over research conducted in Indian communities (Boyer, 1993). In 1999, in her foundational work on decolonizing methodologies, Linda Tuwahi Smith addressed imperialism, research, and knowledge while also offering guidance to those who aspire to do respectful and ethical work with Indigenous peoples. Her framework for a research agenda that honors and builds the cultural life of a people also serves as a guide for tribes seeking to establish their own guidelines for community-based research.

With the development of tribally controlled K–12 and postsecondary schools, there has been a rise in the national discussion regarding Native-led research agendas and in the development of research capacity among tribal people and their institutions. The National Indian Education Association joined forces with other national Indian organizations in the mid-1990s to develop an Indian education research agenda that remains at the forefront of education initiatives. Other national groups such as the Association of American Indian Physicians supported similar initiatives.

As a growing number of Indigenous scholars were calling for research agendas that were responsive to tribal needs and respected community cultural values, in the United States the *Belmont Report* (1979) outlined the "Ethical Principles and Guidelines for the Protection of Human Subjects Research," which fueled the development of institutional review boards (IRBs) within governmental agencies and institutions of higher education to protect individuals from abusive research practices. Regulations and processes were instituted to foster respect for persons—recognizing their "self-determination" to consent to be subjects of research, to at a minimum "do no harm" and to the extent possible maximize benefits, and to strive for fairness in distribution of both the burdens and the benefits of research (National Commission for the Protection of Human Subjects of Research, 1979). Certainly, these protections extend to all people, including Indians

who are subjects of research studies. However, given the long and often negative legacy of being subjects of research, and a number of issues that emerged in Indian Country despite IRB processes of federal agencies and universities, tribal communities have become increasingly aware of the need to protect not only tribal individuals but also tribal and community reputations, culture, and heritage.

◆ *When Human Subjects Protection Fails to Protect*

Despite the carefully drawn prescriptions for research approval developed by governmental agencies, colleges, and universities, a number of tribal communities continued to experience humiliations and repercussions from poorly conducted or reported research findings. The early research into the outbreaks of the 1993 hantavirus pulmonary syndrome in the Four Corners area fueled newspaper headlines describing the "Navajo Flu." Sensational reporting resulted in Navajo people being denied services in local restaurants and children having to present health certificates to attend summer camps (Kciji, 1993, *Indian Country Today*). The Barrow Alcohol Study issued a premature press release of limited results of a survey that led to headlines describing Barrow as a city of alcoholics. Noe et al. (2006) reported that the negative reporting led Standard and Poor's to lower the city's bond rating, which affected financing for a number of community projects.

IRB processes have not prevented the misuse of research data. The Havasupai encouraged researchers at Arizona State University (ASU) to study the high rates of diabetes among tribal members. In 1990, tribal members began to provide blood samples, with an understanding that they were for diabetes-related research. In 2003, a member of the tribe was surprised to learn at a dissertation defense that a graduate student had used the blood samples to illustrate how an isolated and intermarried group of people had migrated from Asia.[3] Samples of the blood drawn for the diabetes study also have been used to study the incidence of schizophrenia among the tribe. The dispute about the use of the blood samples and whether proper consent was obtained by the researchers is the subject of a major civil lawsuit (Rubin, 2004). Regardless of the judicial outcome of the suit, the case had a profound effect on tribes, especially in the Southwest, with some placing temporary moratoriums on research.

Inherent in the experience of Native people with research is the recognition that all aspects of Native lives are fodder for someone else's desire to own "intellectual property." This can range from capturing their tribal stories for children's storybooks to mapping their DNA for the wealth of information buried in their genes about human origins, evolution, and diversity. The experience of Native people with research such as that conducted by the Human Genome Organization, partially supported by the National Institutes of Health (which also oversee the establishment and regulation of IRBs), is representative of that experience. A component of the Human Genome Project that seeks to collect and eventually map the DNA of vanishing people targets Indigenous people at the heart of their identity. For tribes such as the Lakota of the Northern Plains, who believe their DNA to be closely tied to their origins as buffalo people and with the buffalo, this is the ultimate infringement on who they are. What appears innocuous to outside researchers is profoundly intrusive within the Lakota sense of themselves as a People. Recently, a *New York Times* article (Rother, L. In The Amazon, Giving Blood but Getting Nothing, June 20, 2007, from online NYT archives Web search) shared the experience of Indigenous tribes in Brazil providing blood samples to scientists on the promise of medicine and other help, only to later find that the samples were being sold over the Internet along with their DNA.

These incidents of the failure of human subjects protection have reinforced the importance of direct tribal engagement in the review of and approval of research as well as issues related to the ownership of data and reporting of findings. Tribes realize that they have a responsibility to protect the interest of individual members as well as the community as a whole. Most formal nontribal IRB processes do not account for community interests or protections. In the following section, we describe the different ways in which research authority is or could be exercised through tribal review processes and their influence on research.

◆ *Claiming the Research Agenda*

Few Americans fully appreciate the political status of American Indians and Alaskan Natives.[4] In Indian country, sovereignty expresses the recognition of and respect for tribal governance and nationhood. Treaties between Indian Nations and the United States established a unique federal/tribal relationship.

Recent federal laws have encouraged tribal self-determination and self-governance. As a result, many tribes now operate their own economic development, infrastructure, educational, health, and welfare programs through funding relationships with the federal government and through their own economic relationship. Programs operating on Indian reservations operate within a civil structure unfamiliar to most Americans. Tribes are governmental units separate from state and local governments. In many tribes, the governing bodies include a General Council, which is composed of all tribal citizens of age 18 and above, and an elected business council, which is usually called the Tribal Council. Other tribes have more traditional forms of governments based on historical leadership patterns (LaFrance, 2004). In addition to running a number of business enterprises, tribes construct and manage housing programs, dispense welfare through tribal Temporary Assistance to Needy Families programs, provide employment training services, operate their own health clinics through contracts with the Indian Health Service (IHS), and operate their own day care centers, Head Start, K–12 schools, and tribal colleges and universities.

It is not surprising that as tribes take over the delivery of services to their members, they are also reclaiming their right to determine what research will be done in their communities. In their guide for tribes regarding how to develop a research code, The American Indian Law Center (1999) explained the importance of tribal self-determination regarding research.

> Indian tribes, in addressing the question of regulating research in the Indian community, are in fact defining for themselves the degree to which they wish to make themselves available as subjects. While they may and probably should feel a responsibility as members of the human community to participate in some kinds of research and assume a fair share of the risks inherent in research which will benefit society as a whole, they must define this responsibility for themselves, and they should not feel that the value systems of research professions are of universal validity, binding on them for all purposes. (p. 5)

Although tribes in the United States have the authority to establish formal research review procedures, only a few have developed their own IRB processes. Bowman (2006) estimated that less than 1% of tribes have their own review boards, although many rely on those established by federal agencies such as the IHS or their own institutions of higher education. Regardless of whether a tribal government has developed a formal IRB or alternative review processes, research, especially in any health-related area, is now subject to tribal approval either through the IHS or, in some cases, a tribal college.

♦ *Indian Health Service IRB*

Any research that is conducted in an IHS facility must be approved by either the national IHS review board, or any of the 10 IHS service area IRBs. In addition to standard IRB protections for human subjects, the guidelines for review require that formal written approval from appropriate tribal governments must be submitted with the research proposal. They further state that any publications or presentations with findings about specific tribes must be accompanied by approval from the relevant tribal government(s), even if the tribes are not named in the manuscript. If a tribe has its own IRB, the research project must have the approval of both the tribal and IHS IRBs. However, if a tribal IRB is registered with the Office of Human Research Protection and has a Federal-Wide Assurance (FWA), then the tribal IRB process is sufficient (U.S. Department of Health and Human Services, Indian Health Service, 2007).

♦ *Tribal College IRB*

In 2004, the *Tribal College Journal* dedicated an issue to research at Tribal Colleges and Universities (TCUs), and described the importance of establishing a TCU IRB. According to Hernandez (2004), TCUs are increasingly adopting review procedures that serve as gatekeepers for research in tribal communities. He reported on a survey in 2002 that found that only 9 of the 35 tribal colleges had IRBs. In June 2007, the American Indian Higher Education Consortium polled its membership of 34 TCUs and found that 11 reported having their own IRBs, although some of these partner with a tribal IRB, and 2 colleges are partnering with an institute of higher education's IRB. Tribal colleges can choose to register with the federal Office of Human Research Protection (OHRP) and be designated as having an FWA, which allows the college to receive federal funds to conduct research themselves.

Dr. William Freeman, the former chair of the national IHS IRB and currently on the faculty of Northwest Indian College, has provided extensive training to TCUs regarding the steps involved in establishing an IRB (W. Freeman, personal communications, June 28, 2007). He encourages the development of IRBs that are flexible and can be shaped to fit the needs of the student population and the communities served by the college. When a tribal college receives a request for research that is limited to using only their students as participants, or only using student data within the control of the college, it may or may not request a review by a tribal government or an entity of the tribe. However, whenever the research has potential to influence tribal culture or community, Freeman recommends that the college formally engage the tribe in the review. He cited an example of a request to research a college's Native language program. Although the research would be working only within the college language program, the Culture Committee of the tribe was formally consulted in the review processes.

Although IRBs do not exist in all the tribal colleges, many of them have research policies that oversee the conduct of research in their institution and serve as a resource for local tribal research relationships. This development arose naturally out of the increasingly educated Native population now returning to tribal communities.

♦ *Tribal IRB*

The National Congress of American Indians (NCAI)[5] commissioned a study regarding research regulation options for tribes (Sahota, 2007). The paper outlines various approaches that are being used or could be considered by tribes to control research in

American Indian and Alaskan Native communities and presents advantages and disadvantages for each. The following list illustrates the various ways in which tribes are implementing or can consider policies to regulate research.

- *Contracting with entities that have IRBs:* Tribes can contract to use IRBs such as those developed by the IHS or by tribal colleges on the reservation or another institution of higher education. Obviously, partnering with an existing IRB is an attractive option for smaller tribes that lack the infrastructure and personnel to oversee research. Tribes that have a small demand from outsiders for research would also benefit from partnering with an existing IRB. However, tribes have less control over research decisions, especially if they partner with an outside institution of higher education.

- *Creating a tribal IRB:* In choosing to establish a tribal IRB, tribes exercise their sovereignty and have control over decisions related to research in their community. A tribe can form a formal IRB that is approved by OHRP and has an FWA, or it can develop a research review process tailored to its own community. Sahota lists seven tribes that have IRBs—Cherokee Nation, Chickasaw Nation, Choctaw Nation, Ho-Chunk Nation, Navajo Nation, the California Rural Indian Health Board, and the Three Affiliated Tribes of North Dakota. In addition to exercising sovereignty, tribal IRBs lend legitimacy to research in their communities. The disadvantage is the time and money required to staff the IRB and train board members.

- *Using community advisory boards or other forms of research review committees:* One alternative to a formal IRB is the establishment of a community advisory board (CAB). The board can be established to oversee and advise a particular research project, or the tribe might create a CAB to oversee all research. CABs are more closely involved with research than IRB members. They generally work in partnership with the researchers and review and discuss all aspects of the research project as it is being implemented. This continuing relationship with the research is an advantage of CABs. However, as an advisory group, they have less formal authority; however, a tribe can establish a CAB as part of its governing structure and in its laws or codes, establish enforcement procedures. Tribes can establish other forms of review boards that are not IRBs or CABs but perform similar functions. CABs are also a good option for urban Indian organizations that wish to oversee research programs that recruit research subjects from their memberships or programs participants.

- *Using existing committees:* In some cases, a tribe may use an existing committee within their tribal governmental structure to serve as a review board. For example, the Health and Social Services Committee could be assigned to review research proposals relative to its services. Or a Tribal Culture Committee can review research related to cultural practices and language.

Not only do tribes have to be responsive to federal guidelines in the establishment of an IRB, they frequently have to build the capacity of the community to evaluate research opportunities and to create a framework by which not only can research be regulated, but also the tribe can be assured of the benefits of the research. Native scholars exist throughout Indian Country—individuals who are not formally trained in Western methodologies but who conduct research in culture, language, natural resources, and community issues. These individuals can serve as key participants in the research review process. IRBs have requirements regarding who must serve as board members and regarding the formality of the process. Community individuals often require training and special support to fully contribute as participants.

The NCAI article illustrates the wide range of review processes that may affect researchers in Indian Country. Some tribes may engage in a combination of processes, such as initiating the formal IRB through the tribal college and also asking the researcher to work with a tribal cultural committee or advisory board. Researchers need to pay careful attention to the policies in place or emerging among tribes and communities and are advised to make these inquiries well in advance of defining research goals and developing proposals. It is no longer sufficient to rely only on a university IRB process to ensure that research can be conducted in a tribal or Indian community.

◆ *Impact of Taking Control of Research Agendas*

IRBs and related review processes are mostly regulatory in nature, establishing procedural processes to ensure responsive and respectful research. However, non-Indian researchers who have navigated through the new terrain of regulations and procedures are learning that more significant than the procedures are the relationships that are being developed that enhance not only tribal benefits but also researchers' cultural competence and understanding of community-based research practices. In the emerging literature describing research experience in the shifting environment toward tribal control, non-Indian researchers describe a growing appreciation for issues of time, community engagement, reporting findings, and ownership.

Most researchers note that the tribal IRB movement definitely slows down the review process. Researchers seeking approval on a large reservation with subgovernmental units such as chapters or districts often have to make personal visits at meetings to discuss their research proposal and get approval from these units before seeking a formal tribal IRB. Projects that span a state or region will require approval from all the tribes in the geographic area (J. Baldwin, 2007, personal interview; McDonald, Peterson, & Betts, 2005; Sobeck, Chapleski, & Fisher, 2003). However time-consuming, the process itself builds strong connections at the community base and deepens the sense of partnership between the community and researchers. One researcher reported that she thought she understood and practiced community-based research; but only after working through a challenging tribal review process and learning how to fully engage tribal people in the research did she realize the full potential and power of community-based research (J. Baldwin, 2007, personal interview).

Tribal review processes have stimulated development of research teams that include members of the community and outside researchers. Often, it is imperative that a tribal member or employee of a tribal program serve as a co–principal investigator to facilitate the local research processes (J. Baldwin, 2007, personal interview). In a number of studies of social and health concerns in the Great Lakes area, Sobeck et al. (2003) learned that "tribal members themselves must be part of the decision-making if the research project is to beneficial to all actors involved, including tribal organizations and tribal members" (p. 74). They have learned to appreciate tribal values for cooperation, involvement in process, and respect, noting that, in their experience, everyone in a community research team is considered an expert. They caution tribes to encourage community participation and not delegate review responsibility only to their own bureaucratic units.

Community participation is frequently cited as essential in the descriptions of lessons learned from various case studies and articles regarding successful practices in doing research in Indian Country. Mohatt and Thomas (2006) described a collaborative research model aimed at building fully equitable community-investigator partnerships. Over the course of four years, a widely representative group of Alaskan Natives worked with researchers to collaboratively answer questions regarding every step of the research

from considering whether common ground existed (the issue is understood similarly from Native and researchers' points of view) to responsibility for disseminating research results. Noe et al. (2006) set out to study empirically the factors that would influence American Indians to participate as subjects in health research. Their findings supported tribal review processes and community based research practices. They found that communities are more responsive to research when a tribal college or Indian organization conducts the research and the community is actively involved in the designing the study. They also found that research is supported when it addresses serious concerns of the tribe and has the potential to bring money into the community. Compensation and anonymity were also factors that increased the likelihood of worthwhile participation.

Tribal review processes require sharing research findings within the tribal community. Densely written research reports are not appropriate vehicles to meet this requirement. Researchers and their community partners have used various means to inform the community through newsletters, presentations at community meetings, and tribal schools. The Navajo Nation sponsors a biannual conference for researchers to present outcomes of their research on the reservation and to discuss research processes. The conference is open to students, government and tribal personnel, and any other interested individuals.

Access to technology has allowed the posting of research findings and often the storage of data at readily accessible tribal sites. The Research Policy Center of the National Congress of American Indians, the American Indian Higher Education Consortium, the National Indian Education Association, and other national and international groups increasingly provide opportunities at tribal gatherings to share community-based tribal research.

A key issue emerging from the growing interest among tribes to approve and control research is the ownership of data. Tribal review processes force upfront discussion of ownership of data and the role of tribal approval of any publication of findings. As tribes become more sophisticated in the regulation of research, expertise in tribal legal departments will increasingly become part of any research review process. In their advice to Cooperative Extension Professionals, McDonald et al. (2005) noted that tribal concerns over data ownership might require consultation with university legal departments. The researchers had different experiences doing community assessments: In one case, they worked out an informal agreement regarding community ownership; however, in another project, they entered into a more formal agreement with a tribal IRB that allowed the university to retain the rights to use data for noncommercial teaching and research purposes, although the tribal board could review any proposed dissemination of information.

Control of data at the tribal or IHS level and subjecting research publications to tribal or IHS prior review counters the deeply held value of academic freedom and the culture of using peers in one's field to determine the worthiness of articles for publication. However, tribes have their own sense of appropriate storytelling and the importance of presenting information in ways that protect the community's reputation. Shared authorship of publications is one means of overcoming tribal concerns about research use and the "story" that is told. Joint negotiation of how a story is told is a critical ethical concern when working in Indian Country, despite the values that American researchers place on intellectual freedom and the government's limit on their ability to regulate or prohibit research. Indian tribes are subject to the Indian Civil Rights Act of 1968, which protects free expression. When exercising their right to review and approve of publications, tribal governments in both their legislative and judicial branches should justify their actions through balancing protection of the community with individual free expression (American Indian Law Center, 1999).

Researchers are finding that despite the challenges involved in regulatory requirements for research in Indian Country—issues of time, negotiation of ownership, and shaping research to fit tribal priorities—there are many rewards in working in partnership with tribal people. However, there are a number of issues that are not easily resolved through procedural processes, negotiated agreements, or community-based partnerships. Research is not culturally neutral, and Western conceptions of knowledge and research methodologies can bump up against tribal values and worldviews that are contrary to standard academic research practices. In the next section, we discuss ethical issues arising from different cultural orientations.

♦ *Alternative Epistemologies and Value Systems*

Increasingly, Indigenous scholars have engaged in a discourse on indigenous knowledge as it is viewed and experienced within a non-Western way of knowing. Brant-Castellano (2000) described three categories of Aboriginal knowledge:

- *Traditional knowledge:* This knowledge is handed down from generations—creation of stories, origins of clans, encounters between ancestors and the spirit world. This can also be knowledge based on the stories and experiences of the people. This knowledge reinforces values and beliefs.
- *Empirical knowledge:* This is gained through careful observation from multiple vantage points over an extended time.
- *Revealed knowledge:* This knowledge is acquired through dreams, visions, and spiritual protocol.

B. Deloria, Foehner, and Scinta (1999) noted that "the old people experienced life in everything." Knowledge itself has life and moral purpose. The energy or spirit permeating throughout the universe forms connections and "participates in the moral content of events, so responsibility for maintaining the harmony of life falls equally on all creatures" (pp. 49, 52). Making connections to Indigenous ways of knowing, Deloria explained that Western science and the wisdom of traditional knowledge differ:

> The old Indians were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if it is to be useful, was directed toward that goal. Absent in this approach was the idea that knowledge existed apart from human beings and their communities, and could stand alone for "its own sake." In the Indian conception, it was impossible that there could be abstract propositions that could be used to explore the structure of the physical world. Knowledge was derived from individual and communal experiences in daily life, in keen observation of the environment, and interpretive messages that they received from spirits in ceremonies, visions, and dreams. (p. 44)

Native scholars in mainstream and tribal communities are exploring the issues of "Native voice" in both the research experience and in the writing and publication of research. Leading Indian intellectuals discuss this in journals and books intended for Native and non-Native audiences. Elizabeth Cook-Lynn (1998), noted Dakota author and critic, characterized these experiences as the difference between the voice of the Native experience arising from "within a communal, tribally specific indigenous past" (p. 135) and the experience of the objective, that is, scientific approach. It is the difference between having research based in Native life and research based in European or Western culture. Researchers who benefit both professionally and personally from their tribal research experience accept that the Indigenous worldview that is informed by this knowledge is inherently

different from their personal or professional experience as informed by their "mainstream" experience. In Native communities, deeply held cultural beliefs and their related practices form the basis of an understanding that requires an acceptance of ceremony and spiritual activities as a source of that understanding. This is far from the experience of most Western trained practitioners who must not only distance themselves from their subjects but also ignore any hint of a spiritual or creation-based source of knowledge.

Recognition of often contradictory views about creation, practice, and geographic place honors the tribal view that each group of people or tribal nation has their own relationship with the spiritual forces that govern the universe and the purpose of their unique tribal view is to explain relationships as they apply to that tribe (V. Deloria, 1995). Knowledge is also highly personal and based on experience. Contradictory perceptions of knowledge can be accepted as valid because they are unique to the individual, and collective wisdom results through a process of putting minds together (Brant-Castellano, 2000).

These views of knowledge or knowing underscore the importance of approaching research projects in a highly collaborative manner that honors the views and perceptions of cultural values and does not reinforce Western notions of hierarchy and privilege. For example, in tribal community aspects of knowledge are privileged and not viewed as accessible only for the asking. In Native cultures, teachers must determine whether a learner is ready to learn; learners must demonstrate readiness. Therefore, not all information shared by tribal informants, especially elders, can be recorded and reproduced (Brant-Castellano, 2000). An Indigenous researcher faced this ethical dilemma when interviewing an elder in her community as part of her dissertation research. Although she was viewed as worthy and ready for the story she was given, she had to explain to the elder that once she wrote it down in her dissertation, she could not control who would have access to the information.

Issues of credit for stories or information are also problematic. Mohatt and Thomas (2006) explained that noting yourself, your family, and homeland are important in Native cultures. Yet researchers are trained to maintain a distance, to think of participants as subjects with identifying numbers. Confidentiality is critical. Yet in their gathering of stories from Alaskan Natives, many wanted to have their names attached to their stories. They considered their story of resilience in maintaining a sober life should be part of the communities' collective knowledge. It took a negotiation with IRB regulations to allow participants to choose whether or not they wanted to attach their names to their stories. When the participants were assured that all the data for the research project would be destroyed in five years, many objected as they did not understand why their story would not be shared and become part of the accumulated knowledge of community. On the other hand, Sobeck et al. (2003) described problems using community members for data collection because participants would be known and their confidentiality threatened. These competing value stances—between an Indigenous valuing of naming the story as part of a community's shared experience and the Western tradition of confidentiality—need to be negotiated and mediated at the level of personal interactions, within community research teams, and with the regulatory strictures of review processes.

Informed consent processes can be problematic in a culture that values relationships over roles and position. Signing a paper may not be perceived as a trustworthy practice, especially in communities with a history of broken treaties and "paper"-based promises. Consent is based on the credibility of the person, not on the project itself. Smith (1999) noted that asking for consent to be interviewed can be perceived as quite rude in Indigenous communities; consent is based on trust and is a dynamic relationship

and not a static decision. Alternatives to written consent forms are important considerations when working in Indigenous communities. Oral consent may be more appropriate and when gathered within the context of trustworthy relationships, consent should be viewed as ongoing as well as reciprocal. For example, consent should not only be sought when seeking information but also when interpreting information by sharing how a person's information is used in any final report (American Indian Higher Education Association [AIHEC], in press; Christensen, 2002).

Indigenous researchers must comply with the same regulatory demands of approval and review processes (those of the academy as well as within tribal communities) as non-Indigenous researchers. However, the Indigenous researcher is continually challenged to sort out ethical considerations somewhat differently than non-Native researchers. Native researchers positioned as "insiders" have to follow similar processes as non-Indians in terms of gaining approval, working in partnership, and being respectful and responsive. However, Smith (1999) also argued that they have to be humble, "because the researcher belongs to the community as a member with a different set of roles, status and position" (p. 139). Expertise gained through higher education may be appreciated within the community but will not supersede the need to fulfill traditional roles and responsibilities. The young woman described above who was given a story during her dissertation research has to negotiate through her responsibilities to honor cultural traditions, while also meeting the dictates of Western research institutions.

More generally, Native researchers are obligated to continually and critically reflect on the foundations of their formal research discipline (such as anthropology, sociology, education), while also confronting the legacy of colonialism that shapes research experience (Menzies, 2001). They must continually confront complexities in negotiating across boundaries of Western research standards and traditional notions of what type of knowledge is valued. For example, positivist research designs focusing on Western notions of external validity encourage experimental or quasi-experimental designs requiring manipulation and isolating variables that are viewed as critical in determining causality. This framing of knowledge creation is antithetical to beliefs forming the foundation for Indigenous ways of knowing—beliefs that view knowledge as arising out of observation within context, place, and community. Tribes are essentially ethnocentric. They are less concerned about whether a program is "generalizable" across communities. Rather, they want to understand what works and why it works within their own community.

The current push for "evidence-based" research and evaluation driven by positivist epistemologies are problematic within a cultural framing that believes knowledge does not exist apart from context and community and does not stand alone for its own sake (AIHEC, in press). Indigenous researchers and evaluators must negotiate through conflicting worldviews and run the risk of having their work dismissed if it does not conform to Western notions of rigor or robustness. On the other hand, using "objective" methodologies based on a narrow range of measurement and comparison are viewed as flawed in a tribal cultural context that values forming relationships, connecting with community, and honoring a sense of place (Smith, 1999).

The sorting of dilemmas and contradictions resulting from culturally divergent views of research provides rich opportunities for development of transformative processes that are robust enough to accommodate and value different "ways of knowing," while also contributing to the development of high-quality and sustainable research in Indian and Alaskan Native communities. As Indigenous scholars navigate the shifting

sands of crossing boundaries between tribal and academic worlds and non-Indigenous researchers build bridges to tribal communities through responsive research, the setting is ripe for creative tensions that can lead to new ways of considering research practice and ethical guidelines.

♦ *Sitting by the Fire*

Tribal people want research and scholarship that preserve, maintain, and restore tribal sovereignty, traditions, culture, and language (Crazy Bull, 1997). For research to be complete in its context and content, it must be viewed by the participants as inherently valued and trustworthy (Arlee, 1996; Marker, 1996). As Indigenous people explore ways to revitalize their languages and cultures and to overcome generations of poverty and its attendant social ills, research can be a useful tool in that restoration. Translating traditional practices and experiences into contemporary settings and institutions is part of the contribution that researchers can make to tribal communities. The damage that has been done to the inherent right of tribes to preserve their identity and cultural practice is being undone in Indigenous communities throughout the country. Research responsive to research agendas, done in collaboration with tribal partners and adhering to the self-governance authority of tribes through policies and regulations including IRBs, helps rebuild tribes.

In writing this chapter, we hope to encourage both Indian and non-Indian researchers to continue to share their experiences and tell their stories. It is from reflecting on our experience both from the inside out and the outside in (Symonette, 2004) and through the sharing of our actual day-to-day experience and engagement as researchers in Indian Country that competence is developed. It cannot be found in reading a book about Indians or in watching the latest film intended to portray the Indian experience or in meeting each element of a regulatory process. It is found sitting around the campfire listening to the stories and telling our own stories as well.

♦ *Notes*

1. From the song "Here Come the Anthros," written and recorded by Floyd Red Crow Westerman.

2. Throughout this chapter, various terms are used to represent Indigenous Peoples. We do not believe that there is any one correct term since no words can truly capture the specific names of Peoples who are indigenous to the lands in which they live. Native American and American Indian, Indian Country, Nations, or Tribes are used to describe tribal people of the United States. Aboriginal and First Nations are used for the peoples of Canada. Specific names of Indigenous groups are used as appropriate for reference. In using various terms, we honor the way in which those who wrote articles referenced in the chapter used the terms of description and our own preferences.

3. Havasupai cultural beliefs, like those of most tribes in the United States, do not support the "Bering Straits" theory of migration. The tribe claims that it would not have sanctioned this avenue of research if it had been properly informed (Rubin, 2004).

4. Our discussion of sovereignty focuses on the legal status of American Indians and Alaskan Natives. Although Hawaiian Natives are not formally included in the U.S. government's trust responsibility toward tribes on the mainland, we note that they have faced a similar legacy with research and that they are also developing their own IRB processes.

5. Founded in 1944, the National Congress of American Indians serves as a major tribal government organization with 250 member tribes from throughout the United States. NCAI is positioned to monitor federal policy and coordinated efforts to inform federal decisions that affect tribal government interests.

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American Indian Higher Education Consortium (AIHEC)

AIHEC is the collective spirit and unifying voice of our nation's Tribal Colleges and Universities (TCUs). AIHEC provides leadership and influences public policy on American Indian higher education issues through advocacy, research, and program initiatives; promotes and strengthens Indigenous languages, cultures, communities, and tribal nations; and through its unique position, serves member institutions and emerging TCUs.

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