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Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

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Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

Abstract

This article briefly outlines three examples of cross-cultural academic programs, each bringing to the table either indigenous knowledge or Chinese medicine, knowledge generally considered to lie beyond the "research base" of 1862 land-grant institutions. In the process, the gate-keeping function of our "research-base" is challenged, examined here through a cultural lens. Including diverse ways of knowing as assets within the scope of academic work can enhance engagement outreach, but it asks us to re-examine basic assumptions of our academic culture.

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Introduction

The public mission of land-grant research universities has become the subject of increasing question and debate over the past decade (Boyte & Hollander, 2000; Gerber, 1997; NASULGC, 1999a,b). Despite a long history of success of 1862 land-grant institutions, not all sectors of society have benefited equally (Boyte & Hollander, 2000; NASULGC, 1999a). Questions around who benefits--and who does not--from the actions of land-grant universities, are increasingly commonplace (NASULGC, 1999a,b).

One of the persistent outcomes of this discourse is a calling for renewal of engagement and inclusion of more diversity on the part of these institutions (Boyte & Hollander, 2000; NASULGC, 1999a,b; Barrett et al., 1998, ECOP, 1990, 1991), but at what level? Diversity may commonly be viewed as a function of gender, nationality, race, and sexual orientation of participants or audience.

But important aspects of diversity extend beyond audience to include different ways of seeing, understanding, creating, and constructing knowledge (Peters, 1996; Cajete, 2000; Nisbett, 2002, Semali & Kincheloe, 1999). Schauber (2001) illustrates how diverse underlying values (such as the relationship of humans with nature: mastery over, harmony with or subjugation to nature) may contribute to historical inequities of service by 1862 land-grant institutions. Gerber (1997) warns that academic fundamentalism, defined as the refusal of the academy to value any truth that does not conform to its own professional standards, may compromise trust and partnership in working with external communities.

This article briefly introduces three program examples in the nutrition, food and health domain working directly with groups or organizations historically neglected by 1862 land-grant institutions. The goal here is not to fully detail each program (see Hassel, Hafner, Soberg, Adelman, & Haywood, 2002; Hassel et al., 2001; Deinhart, 1999), but rather to share some of the fundamental lessons and challenges to cross-cultural engagement where diverse knowledge systems are brought together. These challenges are examined through a cultural lens, and possible implications for Extension faculty and educators are briefly explored.

Each of the program examples share the following characteristics:

1. Each is a "grassroots" community-based effort to address a pressing societal problem;

2. The mission/purpose is clearly consistent with the land-grant mission;
3. Teaching, research, and outreach are integrated within each program;
4. A marginalized constituency provides programmatic leadership and ownership;
5. Each has intellectual grounding within a knowledge system fundamentally different from the prevailing "Western science" biomedical understanding of food and health;
6. Much subject matter expertise lies with participant stakeholders external to the university system;
7. Each represents an example of "participatory action research" (Carr & Kemmis, 1986; Gerber, 1997; Greenwood & Levin, 1998; Peters et al., 1999) where research, action, and participation are conjoined by a team of community members seeking to improve their situation;
8. Each has been sustained for at least 5 years.

Program Examples

Medicinal Herb Network

The Medicinal Herb Network is a partnership effort of small-scale medicinal herb growers and practicing health-care practitioners working together to develop locally grown, high quality medicinal herbs (Hassel, et al., 2002). The Network brings together experienced and knowledgeable growers, Chinese medicine (CM) health-care practitioners, and other professionals to improve the production, processing, marketing, and use of medicinal herbs and to research and develop standards of quality. Local practitioners express concerns over dependence upon herbs imported from China because they are perceived to be of increasingly dubious quality. Local herb growers are able to grow many herbs, but are unclear about the demand for and desired qualities of the medicinal herbs they produce.

Accordingly, a goal of the Network is to facilitate communication among these community-based professionals to allow for the production of high-quality, locally grown medicinal herbs for clinical use by licensed practitioners of CM. CM represents a system of health-care practice entirely different from the biomedical model, with its own language and system of logic for understanding health and diagnosing illness.

The Network has obtained funding to organize and meet regularly, to develop and administer a survey to practitioners of CM regarding current use and demand for specific herbs, and to begin work on developing standards of quality based on organoleptic (sensory) assessment, a means of discerning quality of herbs in Chinese Medicine (CM). The Twin-Cities metropolitan area includes two licensed and accredited schools of Oriental Medicine and is a hub for some 150 practitioners of Oriental Medicine across the Upper-Midwestern United States.

Woodlands Wisdom Nutrition Project

Woodlands Wisdom Nutritional Project represents a proactive approach of Tribal Colleges to address chronic health issues in Native American communities through culturally based food and nutrition programs of teaching, research, and community connections (Hassel et al., 2001). Member institutions are: College of Menominee Nation, Turtle Mountain Community College, Leech Lake Tribal College, Fond du Lac Tribal & Community College, Lac Courte Oreilles Ojibwe Community College, White Earth Tribal and Community College, and University of Minnesota.

Woodlands Wisdom project was conceived by Tribal College representatives as a way for 1994 land-grant Institutions to positively affect the health of the communities they serve. At the time the University of Minnesota was invited to join the program, none of the Woodlands Tribal Colleges had credentialed faculty available to teach nutrition or food safety. The project organized into functional steering, communications, and academic committees, with membership from each institution. Funding was obtained for quarterly meetings and developing a curriculum based upon local community needs and input.

The program created curriculum for Associate of Science (A.S.) degree in Food and Nutrition, now instituted at each member Tribal College. The project draws upon multiple perspectives through which to study food and nutrition, beginning with indigenous knowledge and ancestral understandings of the traditional diets of the Woodlands Peoples. The Woodlands Wisdom food and nutrition curriculum is designed to involve faculty, students, and the community in a cross-cultural exploration of indigenous knowledge, biomedical knowledge, and personal experience. The project also integrates research and outreach into the curriculum and offers a model for Tribal Colleges to play a leading role in community-based efforts to improve the health of American Indian people.

The Dream of Wild Health Network

The Dream of Wild Health is a local network working to "recover and preserve the traditional Indian

relationships between plants and people, and to educate across ages and cultures to restore indigenous cultural wisdom around appropriate care and use of plants for better health in our world" (Auger & Waterhouse, 2001). The project has been bequeathed with many gifts of squash, corn, bean, medicinal plant, and tobacco seeds by a number of influential elders across the North American Continent (Deinhart, 1999). It currently possesses seed stock of almost 400 varieties/species of heirloom plants.

A significant piece of the work is developing a network of knowledgeable Elders throughout the Upper Midwest who provide indigenous knowledge of planting, growing, harvesting, processing, and consumption to improve health. One of the goals of the Dream of Wild Health Network is to help to reduce the illness and suffering from diabetes and heart disease through the foods people eat. The wisdom of Elders suggests that traditional foods, grown in their traditional and proper ways will offer better health to those who eat these foods.

University resources have assisted with funding requests, facilitating nutrient and biochemical analyses where appropriate, and student interaction with the project. Dream of Wild Health principals have given presentations/ demonstrations in several courses and seminars at the undergraduate and graduate level. The project espouses an obligation to share this knowledge with anyone willing to learn.

Discussion

Faculty Role Shift Uncovers Challenges

Each of the project examples involves participants with defined agendas who bring diverse knowledge to issues of food, medicine, and health (Ehling, 2001; Semali & Kincheloe, 1999; Cajete, 2000). At the outset, participants within each program reported significant mistrust of large, land-grant research universities, in part because prior experiences informed them that their knowledge tended to be discounted or ignored if it did not fit within a "scientific" model.

Continuing engagement required working relationships that were perceived as neither paternalistic nor patronizing, but inclusive and respectful of their knowledge. In turn, this necessitated a role shift from Extension faculty as knowledge arbiter to that of co-learner (Carr & Kemmis, 1986; Gerber, 1997, Greenwood & Levin, 1998, Peters, Jordan, & Lemme, 1999; Simpson & Driben, 2000). The shift created more "level ground" to accommodate the divergent worldviews and ways of knowing brought to program discussion, agendas, and design.

In subsequent discussions, participants within each program voiced frustration with what they perceived as a monopoly of perspective and closed-mindedness within land-grant institutions, which they felt excluded their meaningful participation with 1862 land grant universities and their Extension programs. Their questions cut directly to the "research-base" foundation of the land-grant institution:

- "Who gets to decide whether CM and Indigenous knowledge systems create 'valid' knowledge?"
- What justifies these boundaries, and what knowledge do they exclude?"
- Who benefits from the research conducted by 1862 land-grant institutions?"
- Whose interests are served by this research and these boundaries?"
- Who owns the research? What are its consequences in our communities?"

Continued involvement required that these challenges be confronted as authentically as possible in a learning exploration (Argyris, 1990). A cultural lens can be used to critically examine the work of 1862 Land-grant institutions.

Using a Cultural Lens to Uncover and Examine Assumptions Underlying Academic Work

Schein (1992) as has defined culture as:

A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 1992).

One of the most resistant aspects of academic culture is the mode of inquiry, or the process through which knowledge is generated (Kuhn, 1970). Kuhn showed that most scientific research takes place within a taken-for-granted framework that organizes perception, thought, and actions. Kuhn referred to this framework as a "paradigm," described by Carr and Kemis as follows:

A paradigm embodies the conceptual framework through which a group of researchers or practitioners operates and in terms of which a particular interpretation of reality is generated. It also incorporates models of research, standards, rules of enquiry and a set of techniques and methods, all of which ensure that any theoretical knowledge which is produced will be consistent with the view of reality that the paradigm supports (Carr & Kemis, pp. 72, 1986).

The self-reinforcing paradigms operating beneath biomedical and agricultural sciences support sanctions for generating and validating knowledge, in essence setting boundaries around knowledge considered by scientific professionals as "valid." This dynamic makes it difficult for most academic scientists to accept as valid knowledge developed beyond boundaries established by sound research (Kuhn, 1970; Gerber, 1997), a characteristic perceived in these program examples as a form of closed-mindedness that operates to exclude other valuable knowledge.

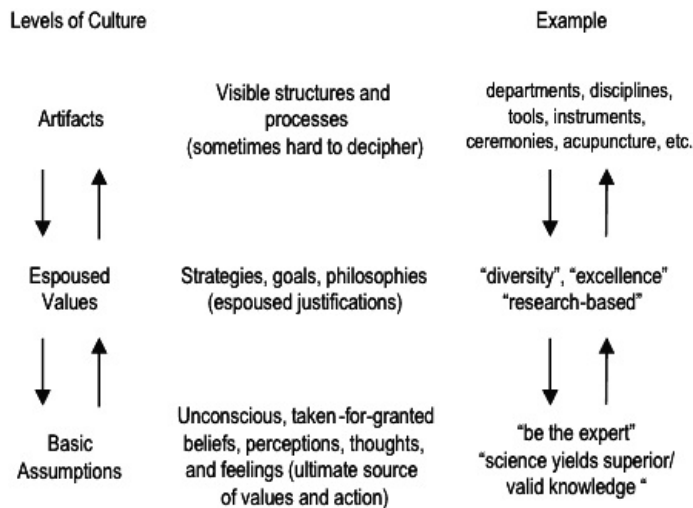
Stakeholders here contested not only the "invalid" status of knowledge they brought to the table, but also the "valid" status of knowledge generated within the prevailing research paradigm. For example, the food guide pyramid was challenged as an effective nutrition education tool in part because it originates from and is limited to a biomedical understanding of nutrition based upon chemical composition of food (proteins, fatty acids, carbohydrates, vitamins, minerals, etc.).

By contrast, CM recognizes "property" (*si xing*, defined as the attribute of a food or medicinal substance that is experienced by the individual as one of the "four natures," cold, cool, warm, or hot) and "flavor" (*wei*, defined as the sensory attribute that one experiences as taste/aroma). These characteristics, as subjectively experienced, are integral to the CM system of medical diagnosis and therapy, and guide appropriate use of food and medicine as determined by CM (Ehling, 2001; Kaptchuk, 2000). A knowledgeable practitioner of CM would regard the food guide pyramid advice to the US population as biased and unbalanced, not taking into account the "sweet" characteristics of grains and dairy products, as seen by CM, predisposing one to excess dampness/obesity (Flaws, 2002). Indeed, we are now in the midst of a dramatic increase in obesity as a public health problem (AMA, 1999).

By bringing diversity in "ways of knowing", these programs suggest our espoused commitments to diversity within the academy, while sincere, may be limited by a gate-keeping system operating to dismiss knowledge that lies beyond established paradigms, regardless of potential value, unless such knowledge can be validated using sanctioned scientific approaches. While scientific inspection of certain tools or methods (acupuncture, herbs etc.) is increasingly commonplace, stakeholders here warned that such approaches discount fundamental concepts (i.e. yin/yang theory) underlying the use of these tools (Hassel et. al, 2002). Participants reinforced the comments of Aikenhead (1997), saying it is crucial not to distort diverse ways of knowing by forcing them conform to epistemologies of Western science. Cultural competency as understood here requires critical examination of our own cultural constructs, aided by the concept of differing levels of culture (Schein, 1992):

Figure 1.

Adapted from Schein, *Organizational Culture and Leadership*, 1992, pp15-20



According to Schein, basic assumptions can be seen as the tenants of a culture that represent the "givens" that tend to be taken for granted and are non-negotiable. If such assumptions are held strongly enough, members will find behavior based on any other premise inconceivable (Schein, 1992). Basic assumptions thus tend to be "invisible" and hence extremely difficult to change. The interrelated and often reinforcing web of basic assumptions gives culture its strength and resistance to change.

But, as the environment changes, some of the shared core-cultural assumptions can become an entrenched liability precisely because of their strength (Schein, 1992). Periodically, core cultural assumptions need to be uncovered and critically examined to determine what to hold onto and what to let go. If unexamined, they may operate to limit the alternatives for renewal and innovation. The cross-cultural engagement reported here forced an uncovering and examination of basic assumptions, a prospect quite different from engagement at the more visible but less powerful artifact or espoused value level.

A relevant example of superficial change at the artifact level would be an approach to adapt the food-guide pyramid for use with Native American communities by including traditional Indian foods such as wild rice, venison, and bear in the pyramid construct. While useful at one level, such an approach leaves the biomedical perspective of the pyramid construct unchallenged beneath the

food symbols. Community educators are left with the impression that the construct is universally applicable, while deeper indigenous knowledge of local foods, seasonal eating patterns, and food as nurturance (Cajete, 2000; Liquori, 2001) is disregarded.

Brookfield adds the dimension of hegemony to basic assumptions: Hegemonic assumptions are:

Those assumptions that we think are in our own best interests but may actually work against us over time. The dark side of hegemony is that we take pride in acting on the very assumptions that work to enslave us. They represent beliefs that seem obvious and desirable but can work against us to be harmful and constraining" (Brookfield, 1995).

The gate-keeping function of a "research-based" approach, while needed to provide us with guidance, boundaries, and even a "comparative advantage," may also act as a hegemonic barrier by excluding diverse knowledge and stakeholders from the engagement work of 1862 land-grant institutions.

Challenges and Benefits of Engaging Diverse Paradigms: Implications for Cooperative Extension and 1862 Land-Grant Research Universities

By bringing to the table knowledge that has been constructed outside the boundaries of our "research base," these programs each raised challenges to basic assumptions and potential hegemony within 1862 land-grant institutions. As practiced here, cross-cultural engagement allowed for critical self-reflection through a cultural lens to create room for more open discourse, learning, and action (Greenwood & Levin, 1998; Brookfield, 1995; Simpson & Driben 2000).

This process calls for self-challenge by 1862 land-grant faculty--the willingness to side-step defensive responses (Argyris, 1990), temporarily de-stabilize ones cognitive world, and tolerate high levels of anxiety and fear (Schein, 1992) for the purpose of learning, gaining greater insight, and maintaining working relationships. Accepting this challenge resulted in operating environments where neither the universality of the biomedical worldview nor the authority of its paradigm to validate knowledge derived from other worldviews is assumed. Such an outcome was critical to success as seen by stakeholders because diversity of perspective and epistemology is honored, respected, and given more level ground for critical consideration.

These examples also suggest possibilities for enhanced innovation and a wider scope of work for 1862 land-grant institutions if multiple worldviews and paradigms can be brought to bear on a problem in a critical, balanced, and fair-minded approach (Hassel, 2002). Many new ideas are generated, analogous to those that occur at the margins of disciplines. Further, the risk of uncritical over-attachment to any one paradigm, including prevailing Western science epistemologies, is greatly reduced.

Physicist K. C. Cole states: "What we see depends on what we look for. Which is the true perspective? It may be that the only wrong perspective is the one that insists on a single perspective" (Cole, 1999).

The gate-keeping function of a "research-based" approach, while useful in many ways, may have unintended consequences of excluding diversity from the work of 1862 land-grant institutions. This work suggests that such consequences are not requisite, if faculty pursuing cross-cultural engagement can risk examination of some basic assumptions operating within academic culture. While content expertise remains absolutely essential, experience here indicates that programmatic success depends even more upon building trust and maintaining personal relationships in a spirit of open inquiry.

Trust and relationships, in turn, are built upon a demonstrated willingness to recognize and call into question one's own authority, to step into and reason within an entirely different epistemology without becoming defensive (Argyris, 1990), and to be able to shift roles "from expert to acolyte" (Simpson & Driben, 2000). Creating environments that allow such challenges to surface, and then using them to facilitate innovative engagement (NASULGC, 1999a) and learning communities (NASULGC (1999b) could represent a crucial intellectual contribution of Extension to 1862 land-grant institutions in the 21st century.

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