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Thematic Issue 16(3)

2011 National Outreach Scholarship Conference

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The centrality of engagement is critical to the success of higher education in the future. Engagement is essential to most effectively achieving the overall purpose of the university, which is focused on the knowledge enterprise. Today's engagement is scholarly, is an aspect of learning and discovery, and enhances society and higher education. Undergirding today's approach to community engagement is the understanding that not all knowledge and expertise resides in the academy, and that both expertise and great learning opportunities in teaching and scholarship also reside in non-academic settings. By recommitting to their societal contract, public and land-grant universities can fulfill their promise as institutions that produce knowledge that benefits society and prepares students for productive citizenship in a democratic society. This new engagement also posits a new framework for scholarship that moves away from emphasizing products to emphasizing impact.

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From the Guest Editor's Desk . . .

With this special issue, the *Journal of Higher Education Outreach and Engagement* continues a long tradition of exploring the themes of the National Outreach Scholarship Conference. In October 2011, the Engagement Scholarship Consortium (ESC) convened its 12th annual meeting in East Lansing, Michigan, on the campus of Michigan State University. It was the first time the conference had visited Michigan and organizers invested considerable effort in preparing what they hoped would be a thought-provoking event. University leaders; faculty members; academic, Extension, and professional staff; and community partners engaged in a planning process for over 18 months, supported by the feedback and reviews of colleagues from ESC universities and other institutions.

The theme selected for the 2011 conference was “Engaged Scholarship and Evidence-Based Practice,” in recognition of the contributions both scholars and partners bring to effective university-community collaborations. Thematic tracks were developed to support this theme, by attracting presentations from broad a range of interests and areas of practice. Five tracks were identified:

- Methods and Practices of Community-Based Research and Creative Activities
- Translational Science and the Diffusion of Innovation
- Globalization and International Engagement
- Technologies as Tools for Engagement
- Leadership and Professional Development for Engaged Scholarship

In order to anchor the tracks in the program, a general plenary session was organized around each, featuring presentations and discussions by a panel of notable invited speakers. Concurrent sessions were organized in three formats: workshops, symposia, and poster symposia. The program also included two poster sessions (further discussion of the 2011 poster sessions appears later in this issue). Presentation proposals were accepted on the basis of their likelihood to advance discourse about engaged scholarship and evidence-based practice by communicating research findings, program designs and impacts, lessons learned, and curricular and policy development reflective of diverse contexts, partnerships,

populations, and institutions. Invited topics included, but were not limited to: community-based research, urban/rural interactions, international contexts, business and industry, distance-based delivery, underserved populations, Cooperative Extension, service-learning, continuing education, and university-wide outreach and engagement programs. In all, the program included 19 symposia (comprising 49 presentations and panels), 34 workshops, 6 poster symposia (for a total of 37 posters), and 104 poster presentations.

The 2011 program also included a number of sessions that have, over the years, become signature events of the National Outreach Scholarship Conference. These include:

- The Emerging Engagement Scholars Workshop – an intensive professional development program for advanced graduate students and early career faculty members;
- The Outreach and Engagement Staff Workshop – a professional development, networking, and community-building initiative for academic and professional staff who work in outreach and community engagement;
- The NOSC Journal Editors Panel – a panel featuring the insights and advice of representatives from scholarly journals that publish articles on community-engaged scholarship and university outreach;
- The International Adult and Continuing Education Hall of Fame Symposium – a session including talks on conference themes by senior academic leaders who are members of this prestigious hall of fame; and
- The Outreach Scholarship W.K. Kellogg Foundation Community Engagement Award Presentations – recognition of the regional winners whose work is publicly presented and juried as finalists for the national C. Peter Magrath University/Community Engagement Award, which is presented at the annual meeting of the Association of Public and Land-grant Universities.

Finally, the program offered special preconference workshops on “Perspectives on Developing Engaged Scholars” and “Utilization-Focused Evaluation” (the latter offered in partnership with the Michigan Association for Evaluation and Capital Region Community Foundation).

The 2011 conference attracted more than 500 attendees from 75 universities and colleges in 29 U.S. states and five additional

countries, including Australia, Canada, Chile, Japan, and South Africa. In addition, nearly 100 people participated in preconference workshops, without attending the conference itself.

This special issue contains articles, abstracts, and reviews by 34 authors from 14 colleges and universities and one community-based organization. The issue includes:

- A white paper from the Association of Public and Land-grant Universities Council on Engagement and Outreach that explores current approaches to community engagement and considers the role of engagement in achieving the knowledge enterprise of the modern university;
- A reflective essay examining the World Grant Ideal developed by Michigan State University President Lou Anna K. Simon as an affirmation and elaboration of earlier land-grant principles for contemporary global society, and as a broadly applicable model for university-community partnerships;
- An autoethnographic essay reflecting on the complex experiences and sense-making about collaboration as gained through an evaluation partnership with a performing arts organization;
- Five abstracts describing the work of the inaugural recipients of the Engagement Scholarship Consortium Outstanding Poster Award, a special recognition program for scholarly work presented at the National Outreach Scholarship Conference as a poster;
- Four articles describing the work and impacts of the community engagement projects named 2011 recipients of the regional Outreach Scholarship which were W.K. Kellogg Foundation Community Engagement Awards and the national C. Peter Magrath University/Community Engagement Award; and
- Four book reviews: a new edition of a reference volume on American higher education updated to explore contemporary challenges, a book on effective citizen participation in addressing complex public issues, an edited volume on service-learning with government agencies, and a study of the Duke-Durham Neighborhood Project, offered as a model for community engagement in urban settings.

I would like to convey my deepest appreciation for the commitment of the many colleagues who helped bring this issue to press.

The list is longer than this space can accommodate. It includes the authors, for their contributions both to this issue and to the scholarship of engagement more broadly; the guest associate editors of the *JHEOE* 16(3), Philip Greasley, David Procter, and Ann Ricketts, for their thoughtful reviews and helpful suggestions; the *Journal's* editor Trish Kalivoda for her leadership, unending support, wise counsel, and friendship; associate editor for book reviews Ted Alter, for shaping the book review section; associate editor for reflective essays Hiram Fitzgerald, for his mentoring and advice throughout the publication process; Michigan State University staff member Linda Chapel Jackson, for major and indispensable editorial contributions; the many guest peer-reviewers, for their commitment to improving the literature for us all; University of Georgia staff members Katie Fite, Julia Mills, and Drew Pearl, for tireless effort and patience; and the Engagement Scholarship Consortium and its 2011 planning team, without which there would have been no conference. I hope all who read this issue will appreciate what the authors have given us. I also hope they will consider attending future meetings of the Engagement Scholarship Consortium and finding ways to support its important work.

Burton A. Bargerstock

Guest Editor, *Journal of Higher Education Outreach and Engagement*

Co-Director, National Collaborative for the Study of University
Engagement

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University Outreach and Engagement

Michigan State University

ASSOCIATION OF LAND-GRANT UNIVERSITIES:
COUNCIL ON ENGAGEMENT AND OUTREACH
WHITE PAPER

The Centrality of Engagement in Higher Education

Hiram E. Fitzgerald, Karen Bruns, Steven T. Sonka,
Andrew Furco, and Louis Swanson

Abstract

The centrality of engagement is critical to the success of higher education in the future. Engagement is essential to most effectively achieving the overall purpose of the university, which is focused on the knowledge enterprise. Today's engagement is scholarly, is an aspect of learning and discovery, and enhances society and higher education. Undergirding today's approach to community engagement is the understanding that not all knowledge and expertise resides in the academy, and that both expertise and great learning opportunities in teaching and scholarship also reside in non-academic settings. By recommitting to their societal contract, public and land-grant universities can fulfill their promise as institutions that produce knowledge that benefits society and prepares students for productive citizenship in a democratic society. This new engagement also posits a new framework for scholarship that moves away from emphasizing products to emphasizing impact.

Introduction

Commentary on American public higher education describes a landscape beset by challenges and opportunities related to its relevance and cost. This paper proposes that community and public engagement, as aspects of learning and discovery, are central to addressing these challenges and opportunities. Through engagement with local and broader communities, we seek a means to expand and shift from the established internally focused, discipline-based framework of higher education to a framework focused on a stronger level of societal relevance that improves both society and the overarching goals of higher education.

Historically, in a different societal context, higher education reached out to communities in an expert model of knowledge delivery. That connection with communities has transitioned over the years to a more engaged model in which community and university partners co-create solutions. This occurs at local, national, and global levels. Today and in the future, public universities need to build on their experience of university–community relationships and transition to making engagement more central to the core of

the institution. Through such progress, higher education can continue to contribute fully to the advancement of the United States as a stronger, wealthier, and more equitable country.

The historical and philosophical context presented in this white paper offers an underpinning for a deeper conversation among higher education institutions regarding community engagement and its role in informing the discovery and learning missions. We describe historical connections between higher education and society at large, then define engagement as it is currently understood among higher education communities. Next we discuss the role of the engaged university in a dynamic future society that relies on new and advanced sources of knowledge.

Today's higher education leaders find themselves at a difficult and important decision point. A coalescence of political, social, and economic pressures may push higher education institutions to consider disengaging from their communities as they must find ways to reduce staff, consolidate programs, and focus energies on particular legislative agendas. However, we posit that a more comprehensive level of engagement between the university and its many communities will foster stronger support from multiple sources for the future of higher education and society. This engagement will encompass new forms of diverse partnerships to exploit and enhance our discovery and learning expertise across economic, social, educational, health, and quality of life societal concerns. We also posit that this imperative to make engagement a more central feature of higher education is perhaps strongest for public and land-grant institutions.

Historical Framework

The Morrill Act initially was grounded in the idea that an educated public was essential for sustaining democracy (*Bonnen, 1998*). It was an idea and a set of core values (*Fitzgerald & Simon, 2012*) about the ability of society to provide broad access to education, to generate the professional workers needed for an expanding industrial society, and to improve the welfare of farmers and industrial workers (*Bonnen, 1998*). These values were grounded on the assumption that knowledge is a primary foundation for the creation of wealth and prosperity. America was crafting a unique system of higher education, focused on efforts to develop the agricultural and manufacturing needs of an expanding nation in a maturing industrial and market economy. Public land-grant college faculty, students, farmers, and business owners were invested in generating

the infrastructure necessary to transform an emergent nation into an industrial and technologically-based economy.

The full story of the value and uniqueness of public land-grant universities is told within the context of the additional acts that set the stage for their impact on society. The 1887 Hatch Act supported and emphasized the importance of research in meeting the needs of a growing society. Through research in agriculture and related fields, new knowledge is created, not only to advance the production of food and agricultural products, but also to improve the health of Americans through our understanding of food consumption. The Smith-Lever Act of 1914 created a system and infrastructure for sharing such discoveries with the public. Through the Extension system, a formal infrastructure for outreach in agriculture, home economics, and related subjects was established.

These three acts (*Morrill in 1862, Hatch in 1887, and Smith-Lever in 1914*) created a public system for connecting universities and citizens to build a stronger democratic society. But as our society evolved and grew more complex, knowledge discovery in the form of applied research was inadequate to answer many core questions in the biological, natural, and social sciences, and the importance of advanced studies began to emerge.

The lack of structure and working examples to guide nascent graduate programs led presidents of 11 private and three public universities to meet in 1900 and create the American Association of Universities (AAU). Their goal was to establish regulatory coherence and standards for advanced degree programs, with particular attention to the sciences, and to motivate students to seek advanced degrees at American universities rather than those in Europe. Soon American higher education adopted the German model of advanced study and laboratory research, which gave priority to knowledge creation rather than to resolution of societal problems.

This new attention to the generation of disciplinary knowledge also created different expectations for faculty, and thus established new criteria for faculty evaluation and retention. By the end of World War II, the AAU membership was nearly balanced between private and public institutions. The goals set forth by the pioneers of 1900 were achieved, but after World War II faculty increasingly became viewed as “experts” whose knowledge was widely seen both as having limited applicability beyond the area of their specialization and being disconnected from community context and community input.

Following World War II, the relationship among universities, their science faculties, and the federal government changed, partly in response to the establishment of the National Science Foundation, the expansion of the National Institutes of Health, and the need for new technologies to support an emergent world power. The postwar military-industrial complex had deep connections to America's research universities, especially its public and land-grant universities. These connections exacerbated the impact of the German model for graduate education and laid the groundwork for transforming the criteria for evaluating faculty performance. Disciplinary rather than social needs drove faculty and students into well-defined and increasingly bounded disciplinary units. Research universities shifted public higher education's focus from the resolution of societal problems to achievement within academic disciplines, and societal perspectives shifted from viewing higher education as a valued public good (*Pasque, 2006*).

A New Kind of Engagement

Attention to the origins of the land-grant idea resurfaced toward the end of the 20th century with assertions that higher education had drifted too far from its public purpose, especially in regard to its teaching mission (*Boyer, 1990*) and the preparation of students for productive citizenship. Although the mission statements of colleges and universities continued to purport a commitment to social purposes, higher education's efforts to address current and important societal needs did not occupy a prominent or visible place in the academy (*Votruba, 1992*). Critics called for renewed emphasis on the quality of the student experience; a broader definition of scholarship-based teaching, research, and service; implementation of true university-community partnerships based on reciprocity and mutual benefit (*Ramaley, 2000*); and an intentional focus on the resolution of a wide range of societal problems. This contemporary approach of serving the public good brought to the academy a new kind of engagement. The new model has required institutions of higher education to rethink their structure, epistemology, and pedagogy; integration of teaching, research, and service missions; and reward systems.

Undergirding this renewed approach to engagement is the understanding that not all knowledge and expertise reside in the academy, and that both expertise and great learning opportunities in teaching and scholarship also reside in non-academic settings. This broadened engagement philosophy is built on understanding

that most societal issues are complex and inherently multidisciplinary. The kinds of specialized knowledge that dominated the latter part of the 20th century are inadequate to address fully today's complex societal issues.

This new engagement also posits a new framework for scholarship that moves away from emphasizing products (e.g., publications) to emphasizing impact. Boyer (1990) suggested that the definition of scholarship should be reframed as consisting of discovery, integration, application, and teaching. The intent was to alter faculty roles so that teaching and application were viewed as equal to research. Others argued that faculty performance should be assessed along a continuum of behaviors and social impacts, rather than by the number of publications in a restricted set of perceived tier journals (Glassick, Huber, & Maeroff, 1997). Glassick et al. identified six standards for assessing faculty performance: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique. Boyer challenged higher education to renew its covenant with society and to embrace the problems of society in shared partnerships with communities. He targeted land-grant institutions in particular because the land-grant idea embraced knowledge application and service to society (Bonnen, 1998). Shortly after Boyer's clarion calls for reform in higher education, the Kellogg Commission (2000, 2001) issued a series of reports challenging higher education to become more engaged with communities through collaborative partnerships rather than as experts with pre-conceived solutions to complex problems.

The commission's challenge requires enormous change within higher education. As Boyte (2002) points out, "to create serious change at a research university requires change in the culture and understanding of research," and in institutional values related to teaching and service. For example, it speaks to the need to embed "change priorities in core reporting, budgetary, and accountability structures of the university" (p. 7).

From their definition of engagement, members of the Kellogg Commission generated seven characteristics of effective societal engagement: being responsive to community concerns; involving community partners in co-creative approaches to problem solving; maintaining neutrality in order to serve a mediating role when there are divergent community views; making expertise accessible to the community; integrating engagement with the institution's teaching, research, and service missions; aligning engagement

throughout the university; and working with community partners to jointly seek funding for community projects (Table 1).

Table 1.A Seven-Part Test of Engagement

1. *Responsiveness.* We need to ask ourselves periodically if we are listening to the communities, regions, and states we serve.
2. *Respect for partners.* Throughout this report we have tried to . . . encourage joint academic-community definitions of problems, solutions, and definitions of success.
3. *Academic neutrality.* Of necessity, some of our engagement activities will involve contentious issues disputes ([that]) . . . have profound social, economic, and political consequences.
4. *Accessibility.* Can we honestly say that our expertise is equally accessible to all the constituencies of concern within our states and communities, including minority constituents?
5. *Integration.* A commitment to interdisciplinary work is probably indispensable to an integrated approach.
6. *Coordination.* A corollary to integration, the coordination issue involves making sure the left hand knows what the right hand is doing.
7. *Resource partnerships.* The final test asks whether the resources committed to the task are sufficient.

Adapted from: Kellogg Commission. (2001). Returning to our roots: Executive summaries of the Reports of the Kellogg Commission on the Future of State and Land-Grant Universities. National Association of State Universities and Land-Grant Colleges by the Kellogg Commission. Washington, DC: National Association of State Universities and Land Grant Colleges, p. 16.

Definition of Engagement

Shortly after the final Kellogg Commission report was published, other definitions of engagement were developed. The Committee on Institutional Cooperation's Committee on Engagement defined engagement as "the partnership of university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching, and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good" (Fitzgerald, Smith, Book, Rodin, & CIC Committee on Engagement, 2005). The Carnegie Foundation for the Advancement of Teaching defined community engagement as "the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Driscoll, 2008, p. 39). In addition, national higher education associations and organizations such as the Association of American Colleges and Universities, the American Association

of Community Colleges, the Council of Independent Colleges, Campus Compact, and Imagining America have developed and formalized similar definitions of engagement.

The collective impact of these definitions implies that if engagement is fully embedded within the core teaching, research, and service missions of the institution, it must be distinguished by at least four foundational characteristics.

1. It must be *scholarly*. A scholarship-based model of engagement embraces both *the act of engaging* (bringing universities and communities together) and *the product of engagement* (the spread of scholarship-focused, evidence-based practices in communities).
2. It must *cut across the missions* of teaching, research, and service; rather than being a separate activity, engaged scholarship is a particular approach to campus-community collaboration.
3. It must be *reciprocal and mutually beneficial*; university and community partners engage in mutual planning, implementation, and assessment of programs and activities.
4. It must embrace the processes and values of a *civil democracy* (Bringle & Hatcher, 2011).

Thus, engaged scholarship embraces knowledge discovery, application, dissemination, and preservation. Engaged scholarship is about knowledge

that continually pushes the boundaries of understanding; that is at the frontier of relevancy, innovation, and creativity; that is organized and openly communicated to build capacity for innovation and creativity; that creates energy, synergy, and community independence to assess projects and processes, providing a reason and a capacity to gain new knowledge; and that is accessible across the chasms of geographic boundaries and socio-economic situations. (Simon, 2011, p. 115)

In 2005, the American Council on Education (ACE) launched a campaign to reclaim for public higher education the identity as a public good worthy of public support. The ACE survey and campaign were not specifically aimed at promoting the concept of engagement, yet their conclusions offer strong support for the centrality of its role.

Engagement is an umbrella that covers every good practice in teaching, research, and service.

- It enriches the learning experience for students.
- It improves research by broadening academic thinking and creating results with greater impact and relevance.
- It supports a curriculum that improves student development as scholars, researchers, leaders, and engaged citizens.
- It advances opportunities for interdisciplinary research and teaching.
- It advances opportunities for internationalizing the university through shared research, scholarship, and service.
- It helps universities demonstrate accountability in an era replete with calls for greater scrutiny and demands for return on investment.
- It improves relationships between universities and their communities.
- It expands innovative practices by allowing researchers to test ideas in a real-world setting.
- It generates unforeseen outcomes that stimulate creativity and innovation.

According to one university president, a fully engaged university

would be grounded in a strong intellectual foundation that relates it to the other mission dimensions. The voice of the public would be institutionalized at every level. Key institutional leaders would be selected and evaluated based, in part, on their capacity to lead the public engagement function. Faculty and unit-level incentives and rewards would encourage and support the scholarship of engagement. Faculty selection, orientation, and development would highlight the importance of the public engagement mission. The curriculum would include public engagement as a way to both support community progress and enhance student learning. Institutional awards and recognitions would reflect the importance of excellence across the full breadth of the mission, including engagement. The planning and budgeting process would reflect the centrality of public

engagement as a core institutional mission. And the university would take seriously its public intellectual role and have the courage to be a safe place for difficult public conversations. (*Votruba, 2011, p. xii*)

The Engaged University

The engaged university is one that produces research of significance that benefits the society and educates students for productive roles in a modern and diverse world. These goals are achieved by maintaining high standards for scholarship and through expanded collaboration and partnership with entities and organizations outside the academy.

Extant definitions do not fully clarify the covenantal relationship between higher education and society called for by the Kellogg Commission, nor do they easily translate into issues related to institutional alignment of engagement (*Klein & Sorra, 1996; Meyerson & Martin, 1987*). For higher education to fully incorporate community engagement into all aspects of institutional mission, it must openly address issues related to faculty roles and responsibilities, student learning environments, institutional benchmarks and outcome measures, institution-specific definition(s) of engagement, rewards for exemplars of engaged teaching/learning, research, and service, and community involvement in community engagement (*Austin & Beck, 2011, p. 247*).

Stanton (2007) has ascertained that, among other characteristics, highly engaged institutions

- have a firmly held shared belief that improving the life of communities will lead to excellence in the core missions of the institution—research, teaching, and service—and improvements in community life;
- seek out and cultivate reciprocal relationships with the communities of focus and enter into “shared tasks”—including service and research—to enhance the quality of life of those communities;
- collaborate with community members to design partnerships that build on and enhance community assets;
- encourage and reward faculty members’ engaged research and community-focused instruction (including service-learning, professional service, and public work) in institutional recognition, reward, and promotion systems;

- provide programs, curricula, and other opportunities for students (undergraduate and graduate) to develop civic competencies and civic habits, including research opportunities, that help students create knowledge and do scholarship relevant to and grounded in public problems within rigorous methodological frameworks;
- promote student co-curricular civic engagement opportunities; and
- have executive leaders and high-level administrators who inculcate a civic ethos throughout the institution by giving voice to it in public forums, creating infrastructure to support it, and establishing policies that sustain it.

Table 2. Five Dimensions and 23 Components Related to Institutionalization of Engagement.

I. Philosophy and mission of community engagement.

Definition of community engagement

Strategic planning

Alignment with institutional mission

Alignment with educational reform efforts

II. Faculty support for and involvement in community engagement.

Faculty knowledge and awareness

Faculty involvement and support

Faculty leadership

Faculty incentives and rewards

III. Student support for and involvement in community engagement.

Student awareness

Student opportunities

Student leadership

Student incentives and rewards

IV. Community participants and partnerships.

Community partner awareness

Partnerships built on mutual understandings

Community voice and leadership

V. Institutional support for community engagement

Coordinating entity

Policy-making entity

Staffing

Funding

Administrator support

Departmental support

Evaluation and assessment

Long-term vision and planning

Adapted from: Furco, A. (2010). "The engaged campus: Toward a comprehensive approach to public engagement," by A. Furco, 2010. British Journal of Educational Studies, 58(4), 375-390.

The advancement and institutionalization of engagement within higher education can be organized along five dimensions: philosophy and mission; faculty involvement and support; student leadership and support; community partnership, involvement, and leadership; and institutional support and infrastructure (Furco, 2010; Table 2). Embedded in these dimensions are 23 components that include alignment of engagement efforts with key institutional priorities, having in place a coordinating body that sets standards of excellence, and strong support for engaged scholarship within academic departments and disciplinary cultures. Studies have found that when these essential components are in place, the institutionalization of engagement is more likely to be advanced (Bell, Furco, Ammon, Muller, & Sorgen, 2000; Furco, 2010).

Institutional Alignment

The challenges for higher education involve changes in how discovery and learning are valued within the context of institutional mission, student educational experiences, and faculty rewards (O'Meara, 2011). As communities of scholars, universities must seek methods of enhanced engagement that are consistent with their scholarly purposes. Within the context of community engagement, student experiential learning, and scholarship-driven service, university-community partnerships pose difficult challenges. As has been implied in the preceding sections, they demand interdisciplinary cooperation, rejection of disciplinary turfism, changes in faculty reward systems, a refocusing of unit and institution missions, and the breakdown of firmly established and isolated silos. Simultaneously, higher education must continue to focus on the hallmarks of scholarship, accountability, and evidential criteria.

Systems change is not new for higher education, as indicated by the shifts referred to previously. The systems change of today does not involve abandoning standards of evidence or rigor of inquiry. It does demand a more inclusive approach to methodology, the recognition that scholarly work is not limited to peer-reviewed articles, and the recognition that knowledge within community is different from knowledge within discipline and that sustainable community change requires the integration of each knowledge source. Holland (2006) observes that "Too often, faculty assume that in a campus-community partnership, the faculty role is to teach, the students' role is to learn, and the community partner's role is to provide a laboratory or set of needs to address or to explore." In fact, successful university-community partnerships will involve all

participants as learners and teachers in shared efforts to seek solution-focused outcomes to society's intractable "wicked" problems.

Institutional Alignment: A Managerial Perspective

Within the constructs established by an organization's purpose (as variously described by mission and vision statements, strategic plans, and, most important, its actual pattern of strategic behavior), managers continually must strive to align streams of revenue with the organization's categories of expenditures such that, over time, total expenditures do not exceed total revenues. Further, the justification of the amount expended within each category needs to be "in synch" with organizational purpose as well as with the types of revenues earned. For managers of universities, as well as most other organizations, alignment of revenue and expenditure streams is a critically important managerial responsibility.

Financial alignment becomes operational through two types of interrelated management tactics: differential allocation across units and/or functions and cross-subsidization. Differential allocation occurs when senior managers distribute funds that are not directly earned by specific functions and units. General funding from the state and some of the revenues from donors are sources of funds for differential allocations. Cross-subsidization (using excess earnings from one type of activity to offset deficits in another) commonly occurs and certainly can be appropriate in well-run organizations. The test of whether cross-subsidization is appropriate hinges on its justification, typically couched in terms of organizational purpose and the long-run viability of the entity.

When the amount of state general funding was large relative to the other revenue streams, nagging questions about cross-subsidization were generally muted. However, as the state share of total revenues has plummeted, the managerial challenge of keeping outflows in balance with inflows and of addressing the appropriate type and amount of expenditures has become a daunting task. The difficulty of this task is intensified within academia because the organization's managerial information systems are often insufficient to deal effectively with such management issues. Existing financial accounting systems tend to be geared to documenting that funds were spent appropriately but not necessarily whether the expenditures were organizationally most effective.

Making the Case for Engagement

In financially stressful times, it is necessary and appropriate for senior university managers to critically examine funding allocations to all of the organization's functions. Scrutiny of the role of the engagement function clearly will be part of that agenda. Of four types of responses to such scrutiny, the first three are important but are not critical to achieving the institution's fundamental purpose.

- U.S. public higher education and, in particular, the historic mission of the land-grant universities, has a heritage of service.
- Efforts within the engagement function demonstrate to stakeholders in the state that the general public funding provided to the university is delivering value to taxpayers, beyond those who are parents of students currently attending the university.
- The university has a role as a good neighbor, similar to the concept of corporate social responsibility within the private sector.

The fourth rationale is that engagement is essential to most effectively achieving the overall purpose of the university, which is focused on the knowledge enterprise. The university, within the broader societal system, has responsibility to fuel knowledge creation, transfer, and application to enhance societal purposes. A robust engagement function is necessary to most effectively achieve that knowledge system responsibility.

Although universities today, especially public and land-grant universities, are key players in the creation of new knowledge processes, the university is not the sole or even primary source of knowledge. Therefore a framework is needed that assists in describing knowledge processes, one that transcends the notion of what is required to move one innovation from the lab to the marketplace. A more useful perspective frames the enterprise as one focused on continual knowledge creation, transfer, and implementation. That framework must recognize the systematic need for creation of the next discovery as well as application of current innovations.

Knowledge creation and knowledge management became managerial buzzwords in the 1990s. Nonaka and Takeuchi (1995) provided a particularly useful evaluation of the process by which firms employ systems to generate decision-relevant knowledge. Although their approach was illustrated within the context of the

commercial firm, the underlying processes are relevant to non-commercial knowledge advances as well. Central to their analysis is the identification of two types of knowledge (explicit and tacit) and the realization that the interaction of both types is critical to a knowledge system.

Explicit knowledge is transmittable in formal, systematic language. Definitions, equations, and theories in journal articles and textbooks are examples of explicit knowledge. Structured educational experiences typically emphasize the value of explicit knowledge. Tacit knowledge refers to the mental models that all decision makers possess of “how the world works.” Tacit knowledge also can be thought of as know-how, experience, and skill that we all use.

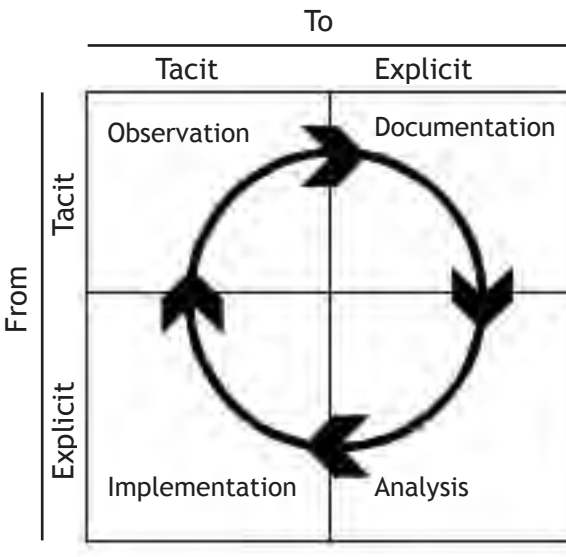


Figure 1. Knowledge Conversion in a Knowledge Creating System.

(Adapted from Nonaka, I., & Takeuchi, H. (1995). *The knowledge creating company*. New York: Oxford University Press. p. 72.

Figure 1 illustrates the knowledge spiral associated with effective knowledge systems (Sonka, Lins, Schroeder, & Hofing, 2000). This figure stresses the necessary interaction of explicit and tacit knowledge to form a system for continual knowledge creation, application, and renewal. The upper left-hand quadrant, labeled *observation*, focuses on the decision maker’s ability to recognize problems and opportunities, often from subtle, non-written cues. The experienced manager (whether a farmer, social worker, or researcher) who seemingly can sense that performance problems exist even when they are invisible to others exemplifies this tacit

observation phase. The *documentation* (upper right-hand) quadrant recognizes that tacit observation by itself often is insufficient. The process of making tacit knowledge explicit, which occurs in the documentation phase, is necessary for effective communication, but this step also results in problem clarification. The lower right-hand quadrant, *analysis*, refers to the type of intensive study and investigation that are typically assigned to analytical problem solving and research. The fourth section, labeled *implementation*, recognizes that there are tacit knowledge creation opportunities associated with the application of recommendations and technologies that result from formal analysis.

The circular arrows in Figure 1 illustrate the knowledge spiral concept, which reflects that effective knowledge creation is a continual process, incorporating both tacit and explicit knowledge. This illustration appears, at least partially, to explain the historic effectiveness of the land-grant university/U.S. Department of Agriculture research/extension system in U.S. agriculture.

The functions of the university can be linked to the four quadrants of Figure 1. The lower right-hand quadrant aligns with a traditional research perspective, in which the scholar's analysis begins with explicit knowledge expressed in journal articles and ends when the results of that analysis are detailed in a new journal article. The lecture mode of teaching similarly can be linked to the lower right-hand quadrant, with the process of transferring knowledge in textbooks to students being assessed by performance on written examinations. Experiential and service-learning activities, however, align directly with the lower left-hand quadrant. In such settings, students can learn how explicit textbook knowledge applies in their domain of interest. Engagement is the connector function that enables the "spiral" in Figure 1 to tie the overall process together. The feed-forward portion of the loop (the upper right quadrant) illustrates a key aspect of engagement: providing the mechanisms to increase the likelihood that the next analysis will respond to pressing societal needs as well as advance explicit scholarship.

The knowledge spiral notion illustrates the way an engaged university should function. Ideally, discovery and learning are integrated and enriched through engagement to allow for more effective creation, application, and then re-creation of knowledge that serves society's needs. Institutional efforts to become an engaged university reflect the realization that engagement enhances a university's ability to fulfill its fundamental purpose. We posit that the engaged

institution embodies the goals and purposes of public and land-grant universities.

Institutional Assessment

Because engagement is about doing scholarly work, it can be assessed and measured from both university and community perspectives. Ultimately, the measurement of engagement can provide evidence for an institution's fulfillment of its commitment to engaged scholarship. It can be used for institutional planning, and it provides a tool for assessing the degree to which engagement is aligned throughout the university. It can provide evidence of the organization's support for engagement by detailing its involvement with community, business, and economic development; technology transfer; professional development; enhancements to the quality of life; and transformational changes in education. And, to the extent that faculty have opportunities to tell qualitative stories, the engagement mission can help build public support for higher education as a public good (*McGovern & Curley, 2011*).

In addition, measuring engagement activities can provide units and departments with criteria for including scholarly engagement as part of the tenure and promotion processes, thereby achieving and fostering institutional change at the level of individual faculty and staff. Benchmarks may thus ultimately provide evidence of reward systems for faculty and staff that include an engagement dimension; curricular impacts of student engagement; applications of the dissemination of research and transfer of knowledge; meaningful engagement with communities; and applications of the evidence of partnership satisfaction.

Charting the Future

American higher education continues to evolve as it seeks to meet the demands of these new times. Today's colleges and universities must adapt to new technologies and maintain standards while resources dwindle during a challenging economy, incorporate emerging and innovative research methods, and respond to a substantial turnover in personnel as retirements hit an all-time high. In addition, they must respond to the increased calls to address society's most challenging needs. This is evidenced by the increased focus on engagement among regional accreditation boards, federal funding agencies (such as the National Science Foundation and National Institutes of Health), college ranking systems, disciplinary associations, alumni, and students.

The challenge for higher education is to find ways to avoid tokenism and make engagement central. Already, too many institutions have responded to the call for engagement by building programs and initiatives that have had little or no real effect on the broader, overall mission and work of the academy. Most, if not all, institutions of higher education support a broad range of community engagement projects and initiatives. Yet, to make engagement a more central feature of the academy, these engagement projects need to be viewed less as discrete, short-term efforts that function alongside the core work of the academy and more as mechanisms for making engagement an essential vehicle to accomplish higher education's most important goals.

To thrive in the 21st century, higher education must move engagement from the margin to the mainstream of its research, teaching, and service work. Nowhere is this more essential than within public and land-grant universities. By recommitting to their societal contract, public and land-grant universities can function as institutions that truly produce knowledge that benefits society and prepares students for productive citizenship in a democratic society.

Next Steps

To thrive in the 21st century, higher education must adopt new approaches in order to move engagement from the margin to the mainstream of its research, teaching, and service. To become fully embedded into the central core of the institution, engagement must be scholarly; cut across the missions of teaching, research, and service; be reciprocal and mutually beneficial; and embrace the process and values of civil democracy (*Bingle & Hatcher, 2011*). Engagement should be aligned with key institutional priorities. Engagement projects and initiatives should be viewed as mechanisms for making engagement an essential vehicle to accomplish higher education's more important goals. For institutions to fully incorporate engagement into all aspects of the institutional mission, it must fully address issues related to structure, budget, and operation. Faculty involvement and support are essential for furthering the institutionalization of engagement. Aligning engaged scholarship with existing university structures, however, is no easy task. It requires a deep look at funding models, reward systems, and policies governing relationships with external organizations.

To make engagement central to the university's discovery and learning missions, we recommend that higher education adopt the principles laid out in this paper, and resolve to support

engagement scholarship as defined and illustrated herein. We recommend that administrators take responsibility for fostering conversations within their institutions that support and lead to the centrality of engagement, and for recognizing and leveraging forces that will move the institution toward the adoption of engagement as an integral part of discovery and learning. These forces may include economic development needs, student commitment to applied learning, faculty desire for change from the status quo, and commitment by stakeholders outside the institution to shared societal or economic outcomes. We further recommend that administrators evaluate the merits of engagement within historically prominent outreach units (e.g., Extension, continuing education, agricultural experiment stations, public media, and medical centers) in view of their potential contributions to an engaged institution. Such units have a strong history of work with the community. Many have transitioned from outreach to highly engaged community work. Others have the potential to substantively elevate their impact within the university and community, and to facilitate cultural change that supports the centrality of engagement as a contributing factor to the effectiveness and viability of higher education.

Specific steps for making engagement central to higher education include creating opportunities for faculty to embrace engagement; stressing the scholarly characteristics of engagement efforts; clarifying the distinction between outreach and engagement; ensuring that faculty governance is involved in determining the role of engagement scholarship in the promotion and tenure process; supporting student, faculty, and staff professional development that will socialize and empower individuals to conduct scholarly engagement; providing infrastructure support for community/university partnership development; developing an understanding of the different norms of engagement and engaged scholarship across the disciplines; and celebrating and leveraging success.

Acknowledgment

In 2010, the Executive Committee of the Association of Public and Land-grant Universities (APLU) Council on Engagement and Outreach charged the authors to develop a white paper on the central role that engagement scholarship should have in higher education. After completing a draft of the paper, they disseminated it to all members of the Council on Engagement and Outreach and requested feedback, both through personal communications and at the annual meeting of the Council on Engagement and Outreach in Dallas, Texas, November 2010. The authors received feedback from 32 colleagues from that

meeting, and proceeded to revise the manuscript in response to their suggestions. The revised paper was disseminated to the same Council on Engagement and Outreach group at its 2011 summer meeting in Portland, Oregon, and subsequently at the annual meeting of the APLU in San Francisco, November 2011. The net effect is that the white paper has been vetted publicly three times and has benefited from positive critiques from nearly 50 individuals representing diverse administrative, faculty, and academic staff disciplines and organizational units. Although the authors bear responsibility for the contents of the final paper, they are deeply indebted to their colleagues for their support and input.

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REFLECTIVE ESSAYS

The World Grant Ideal and Engagement Scholarship

Hiram E. Fitzgerald and Lou Anna K. Simon

Abstract

Michigan State University President Lou Anna Simon's concept of the world grant ideal is grounded in three core values: quality, inclusiveness, and connectivity. These core values fuel the 21st-century imperative to build sustainable global prosperity. They represent an affirmation of the Morrill Act of 1862 in the context of a global society and as a model of university-community collaboration, applicable not only to research-intensive universities but also to higher education in general as well as to a broad range of societal organizations. In this essay, the authors describe the core features of a world grant ideal, provide examples of how Michigan State University has applied the three core values, and draw attention to critical organizational alignments that must occur in order to support fully engaged higher education institutions.

Introduction

In 1855 the State of Michigan established the Agricultural College of Michigan as a state land-grant college. That same year, the Commonwealth of Pennsylvania established the Farmers' High School as a similar institution. Known today as Michigan State University and The Pennsylvania State University respectively, each state's land-grant institution later became part of a land-grant system that was enacted via passage of the federal Morrill Act of 1862. Since it was founded, Michigan State University has consistently and successfully embodied an educational tradition in which vision and values drive behavior. In 1855, the vision of a more widely educated public able to explore, understand, and apply the scientific and industrial concepts reshaping 19th-century society led to a founding class of students not normally considered "appropriate candidates" for higher education, predominantly due to family occupation and socioeconomic status. Revolutionary at the time, this vision came to fruition because of the ideals at the democratic foundation of land-grant universities, including ideals that required land-grant universities to seek and continually renew the highest quality research and education in every academic discipline; ideals that called on the land-grant universities to make knowledge accessible to all who desired to embrace and use it to

advance themselves and the society in which they lived; ideals about the connectivity of the professional and the liberal, the practical and the theoretical, the arts and the sciences; and ideals that recognized the need to apply knowledge-based solutions to societal challenges, requiring that researchers work with people outside academia as partners with as much to offer as to learn. Integrated to fuel the production of cutting-edge knowledge and make it useful for individuals and communities, these ideals sparked and sustained the real-life, problem-based inquiries and approaches to knowledge-based answers that have made land-grant universities so highly regarded today.

Thus, since their beginning, land-grant universities have made outreach to the public, based on research findings and knowledge expertise, central to their missions and values. In the early years, public outreach focused predominantly on agriculture and manufacturing in a university's surrounding communities and state. Achieving improved agricultural yields, developing more pest-resistant fruits and vegetables, and helping small businesses were typical goals in the early days of land-grant colleges throughout the United States. This work was successful, ultimately contributing to the nation's transition into the industrial age, and transforming its economy.

The purpose of this essay is not to review the historical origins or development of land-grant universities; many others have chronicled this history (*Bonnen, 1998; Cross, 2012; Enarson, 1992; Johnson, 1981*). Rather, it is to draw attention to land-grant universities in the context of 21st-century needs. The world is profoundly different from past centuries with respect to the size and urbanization of its population; technology-driven access to and dissemination of knowledge; the extent of racial and social disparities, and challenges to global health; and the sustainability of the planet's natural resources upon which the world's population is critically dependent.

From Land Grant to World Grant

Simon (2009) refers to the paradigm for adapting the ideals and core values inherent in the land-grant tradition to the challenges of the 21st century as the world grant ideal. The world grant ideal provides a way of understanding how a research-intensive university can adapt to meeting the needs of a changing world while continuing to shape the changes that will be hallmarks of the future. For example, by integrating the ideals of the land-grant tradition

into the strengths of modern society, Michigan State University is successfully applying its core values to 21st-century education and globalization. We, the authors, believe that these ideals and core values mold and make strong Michigan State University's engagement with the world. Even more important, we believe that these ideals and core values, adapted to the strengths of universities of all kinds, create a 21st-century framework for advancing higher education's contributions to the public good (*Boyte & Kari, 1996; Kellogg Commission, 1999*). Further, we believe that these ideals and core values are relevant and powerful for a broad range of organizational types across societal sectors.

The 21st century is, in a word, global. Boundaries and borders—geographical, cultural, financial, and political—that once separated nations and continents have become increasingly permeable, making once-remote geographic and societal cultural issues as common as the local agricultural concerns of the 19th-century. While solutions to specific challenges may be identified and pursued in local, state, or national contexts, ultimately these solutions must become part of a combined effort to address challenges facing humanity in settings throughout the world. The interconnectedness of people and nations requires universities to recognize that no problem has only one definitive answer or one definitive application; rather, solutions must be developed with an eye toward incorporating the knowledge gained in one locale to other locales. Indeed, efforts are under way throughout the world to effect transformational changes in the relationship between higher education and society by building partnerships among four sectors of society (often referred to as the quad helix): higher education, business and industry, government, and civil society (see Table 1). These four sectors provide the individuals and organizations necessary for creating and sustaining systems change efforts across the domains of community and economic life.

Table 1. History of the Development of Organizations Focused on Civic and Community Engagement

Higher Education Networks: Focus on Civic and Community Engagement	
Campus Compact	1985
New England Resource Center for Higher Education	1988
Coalition of Urban and Metropolitan Universities	1990
Corporation for National and Community Service	1993
HBCU (Historically Black Colleges and Universities) Faculty Development Network	1994
Community-Campus Partnerships for Health	1996
Rede Unitraballio	1996
Engagement Scholarship Consortium	1999
Living Knowledge: The International Science Shop Network	1999
Imagining America: Artists and Scholars in Public Life	1999
Universidad Construye Pais	2001
Australian Universities Community Engagement Alliance (AUCEA)	2002
New Eurasia Foundation Community-University Network	2004
Canadian Alliance for Community Service Learning	2005
El Centro Latinoamericano de Aprendizaje y Servicio Solidario	2005
The Talloires Network	2005
The Research University Civic Engagement Network (TRUCEN)	2005
International Association for Research on Service-Learning and Community	2006
Higher Education Network for Community Engagement	2006
The Coalition of Urban Serving Universities	2007
Association of Commonwealth Universities Extension Network	2008
Campus Engage: Network for the promotion of civic engagement in Irish higher education	2008
Community Based Research Canada	2008
Global Alliance on Community-Engaged Research	2008
Ma'an Arab University Alliance for Civic Engagement	2008
The National Coordinating Centre for Public Engagement in Higher Education	2008
Transformative Regional Engagement Networks	2008
REDIVU (Ibero-American Volunteer Network for Social Inclusion)	2010
South African Higher Education Community Engagement Forum	2010
Networks with a Secondary Focus on Civic and Community Engagement	
Association of Public and Land-Grant Universities (formerly NASULGC)	1887
Association of American Colleges and Universities	1915
International Association of Universities	1950
National Association of Universities and Higher Education Institutions	1950
Association of Colombian Universities	1957
American Association of State Colleges and Universities	1961
Association of African Universities	1967
Global University Network for Innovation	1999
PASCAL International Observatory	2002

Adapted from Watson, D., Hollister, R. M., Stroud, S. E., & Babcock, E. (2011). The engaged university: International perspectives on civic engagement. New York, NY: Routledge.

With the aim of exploring how the world grant ideal can provide the framework by which all universities can address the pressing societal needs of the nation and the world in the 21st-century, we draw upon Michigan State University's involvement with local and global communities for the betterment of society. We assert that this involvement, referred to as community engagement scholarship (Barker, 2004; Glass & Fitzgerald, 2010; Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012), reflects the founding ideals and core values of all land-grant universities, defining their philosophy of scholarship, and demonstrating what higher education can accomplish across its diverse areas of expertise. Through the use of examples and specific situations, this essay illustrates how the world grant ideal can work within communities. We demonstrate how a 21st-century framework for advancing higher education's contributions to the public good (Boyte & Kari, 1996) can be established to ensure its viability in neighborhoods and cities, across continents, and into the future (Kellogg Commission, 1999).

Setting the Context: From 19th-Century to 21st-Century Societal Challenges

During the 20th-century, human populations throughout the world migrated to increasingly large and complex urban regional centers; indeed, humanity can now be characterized as an urban species (Birch & Wachter, 2011). Large regional centers currently generate nearly 85% of all jobs, a percentage that will climb rapidly as urban centers continue to grow. Rapid growth without transformational change in education levels, however, comes at a cost. That cost is becoming increasingly visible in the 21st-century. The need for more extensive education, both qualitatively deeper and offered to a larger percentage of the population, becomes more obvious every day.

Population demographers do not generally draw attention to concentrations of poverty and the inability of substantial numbers of urban populations to achieve the quality of life necessary to invigorate society, but these places exist, and the impact of their disadvantages on their own future as well as society's cannot be ignored. At-risk neighborhoods with concentrated poverty, weak social ties, and a poor-to-nonexistent economic base do not have the social or human capital required to bring about transformational change. Other social institutions, usually working in isolation, have not been able to ameliorate these problems.

The same quality partnerships that stimulated agricultural production in the 20th-century must today be marshaled to steward natural resources, build 21st-century knowledge economies, transform transportation, create livable and walkable communities, infuse art and culture into everyday life, and eliminate social and racial inequities. Without these quality partnerships—built on mutual problem-solving definitions, creativity, innovation, and shared commitment—urban communities that should become the center of positive change in the world will instead become centers of stagnancy, with individuals and society suffering the consequences of extensive unemployment (*Bok, 1982; Votruba, 1992*).

Higher education has a critical role to play in addressing all these challenges, and one method for doing so is working in concert with community partners to develop high quality evaluation designs that will produce evidence to inform programs and practices through which the people of these areas can reach their potential and contribute to society and their own well-being (*Ahmed & Palemo, 2010; Leiderman, Furco, Zapf, & Gross, 2002*). Through the core land-grant values of quality, inclusiveness, and connectivity—adapted to 21st-century realities—higher education can engage with 21st-century society for the betterment of individuals, families, communities, and economies into the distant future. These core values are embedded in the foundations of 21st-century engaged scholarship (*Simon, 2009*). They not only shape approaches to engaged scholarship, but also guide the active practice of engaging with individuals and communities to co-create approaches to and solutions for community-defined problems (*Foster-Fishman, Berkowitz, Lounsbury, Jacobson, & Allen, 2001*).

Quality.

The concept of quality seems self-evident, and parts of the concept are (i.e., an institution's commitment to developing to its fullest capacity highly regarded education and research programs across the scientific and humanities disciplines; and creating an atmosphere in which critical thinking, continued learning, and intellectual reach beyond the present are constants). Land-grant universities have proven their ability to conduct quality research and provide quality educational experiences. In the 21st-century, continued quality does not mean abandoning the standards of intellectual and academic rigor. Rather, it means expanding one's understanding of where to seek important questions that, when investigated, promise to inform responses to local and world challenges. Today, world issues and needs are broader and deeper

than they were two centuries ago, and how quality is pursued has changed.

Inclusiveness.

In the 19th-century, the concept of inclusiveness opened U.S. higher education to a broader cross section of society. It also expanded the subject matter taught and researched to include topics that were directly relevant to society. This expanded breadth of inquirers and inquiry forever changed higher education as well as the nation's use of knowledge to impact life and work for the majority of the population. Inclusiveness in the 21st-century not only encompasses the advantages and innovations ushered in at the launching of modern universities, but also includes an acknowledgment of the importance of blending community knowledge with academic expertise in pursuit of solutions to daunting and pervasive societal problems. Twenty-first-century inclusiveness means moving emphasis from first-order change (scaffolding changes in existing programs and practices) to second-order change (innovation and paradigmatic shifts in how things are done; *Foster-Fishman, Nowell, & Yang, 2007*). It means evolving the teaching technique of service-learning from volunteerism to an emphasis on learning and the development of citizen-scholars. It means expanding the definition of access to include opportunities for students to work with community partners so that they better understand the lived experience dimensions of societal problems, and the practices for co-creating solutions (*Adler & Goggin, 2005*). It means university researchers and practitioners working side-by-side with community members to develop innovative and sustainable solutions to societal problems. In short, inclusiveness means that the epistemologies of the past may not be relevant to the solution-focused university-community partnerships needed to address 21st-century societal needs (*Saltmarsh, 2010*).

Connectivity.

In the 19th-century, a university's core value of *connectivity* involved working with the community *outside* the university. Practicing this core value required that all the participants respect and appreciate one another, and recognize the interdependence of research and practice. The great land-grant educational experiment of merging education and community involvement to increase knowledge to benefit humanity expanded this core value. Today, connectivity means more than just working in service to or with

community partners; it means crafting strategies to create and sustain community-based initiatives where none existed or where local history has created impenetrable boundaries to system-access both within communities and within institutions of higher education (Fitzgerald, Allen, & Roberts, 2010; Simon, 1999). In other words, knowing-and-being in higher education has successfully transformed into knowing-and-doing.

Today, synergies across the core values of quality, inclusiveness, and connectivity in the context of the world grant ideal and engaged scholarship serve as a guiding philosophy for framing aspirations—ambitions of universities, individuals, and communities. These aspirations blend traditional paradigms and measures of quality with metrics that reflect the complexities of 21st-century impact and accountability. The metrics of such blending provide evidence not only of traditional public service activities, but also of engagement. Such metrics demand scholarship as an element critical for validating the importance of more than just “doing well” for a community (Fitzgerald et al., 2010; Fitzgerald et al., 2012).

In the 21st century, universities need to recognize their community partners as partners, not just recipients of help (Simpson, 2000). By working in collaboration with a range of partners, university members increase their knowledge and expertise through accepting, listening to, and engaging with community members who are closest to and best informed on the challenges that create barriers to transformative economic and social change in their communities. Community partners may include neighborhood residents, school officials, business leaders, government agents, nonprofit service-providers, health care professionals, local youth groups, or various combinations that reflect components of the quad helix (higher education, business and industry, government, and civil society).

An outsider cannot reasonably and fully understand or construct a change model without adequate input from those seeking guidance or solutions. A university that recognizes and considers itself part of a community—situated in and working with that community—will realize that its partners share in co-creating knowledge and capacities to address what concerns them (Pasque, 2010). Today’s challenge is to expand the past success of university-community partnerships in agriculture and manufacturing to the domains of green energy, educational disparities, agribusiness, advanced manufacturing, health and nutrition, and educational systems. Recognizing knowledge economy requirements and applying innovative thinking and entrepreneurial investment will be essential.

Land-Grant University Responses

As noted by Simon (1999, p. 3), so solid is the philosophy behind the historical successes of land-grant institutions that they “provide the platform, the will, and the incentives of scholars in a research-intensive environment to use their special skills to achieve the powerful relevance to society [now referred to as] engaged scholarship.” Land-grant universities enter this new era with the historical perspective to create new roles in the nature of society for its practical needs (Bonnen, 1998).

Translating Past Successes to Today

In this millennium, members of land-grant universities recognize the complexity of challenges permeating the world. They have expanded the reach of their engagements to encompass scientific concepts and to address societal issues arising from exclusively 21st-century circumstances. The world has changed and requires that land-grant universities become more “world grant” in their ideals and their actions. They must apply their strengths (e.g., agriculture and agribusiness, health and family quality of life, sustainability, and the knowledge economy) to 21st-century challenges.

Applying quality, inclusiveness, and connectivity provides opportunities for higher education to draft its own version of the five C’s of digital inclusion (*Digital Inclusion Panel Report, 2004*): connectivity (access to the Internet), capability (access to skill development), content (culturally appropriate materials), confidence (adult learning, workforce development), and continuity (sustainability of interventions and change models; see Jackson, Fitzgerald, von Eye, Zhao, & Witt, 2010). Each of these digital knowledge economy components has its parallel within the university. For example, in a university context, *connectivity* refers to the relative ease with which faculty and community members can access one another and build partnerships. It means overcoming university and community institutional and cultural barriers that interfere with such efforts.

Capability refers to recognition that skills and knowledge reside in both universities and communities and that faculty must reflect deeply on the epistemological approaches that drive their research and creative activities. Engagement scholarship particularly rejects positivism (Fisher, 2006) and instead links with pluralistic approaches to knowledge that emphasize dynamic systems theory, contextualism, and multiple and evolving theories of change. For example, the University of Salford in the United

Kingdom has integrated Dooyeweerd's (1955) theory of aspects into all of its community activities. The theory of aspects is a comprehensive systems theory that recognizes that any thing (e.g., event, object, entity) has multiple aspects, and that the dominant aspect of interest varies from individual to individual. One member of a community-based initiative may focus primarily on the network of relationships generated by the initiative, another member may focus on the inequalities that exist across constituent members of the network, and yet another may be involved in the initiative only to access a specific community-based program. Achieving a common focus for the overall goal of a community-based initiative will depend in part on how these various aspects or views of the initiative can coalesce around a shared mission. Dooyeweerd's theory is especially aligned with the principle of co-creating solutions in university-community partnerships because it requires generation of a shared narrative to guide work toward ultimately achieving the "big picture" while simultaneously supporting programs and tasks that need to be accomplished in the present.

Content demands that a partnership address issues of racial and social inequity, cultural context, and development of culturally appropriate materials where none currently exist, or where such inequities impede success. *Confidence* challenges traditional approaches to teaching and learning and professional development programs for faculty and academic staff (Powell, 2010) whereas *continuity* draws attention to the ability of faculty and community partners to sustain the many changes that may occur within any sector of the quad helix that composes a partnership, including their co-constructed narratives.

Clearly, to re-create the university, advance its core values, and interconnect with societal partners will require more than just changes from linear to matrix organizational models (Alpert, 1985; Brukardt, Holland, Percy, & Zimpher, 2004). Alpert developed a matrix organizational model for higher education in an effort to identify barriers to reformulating higher education's linear drift toward disciplinary and department autonomous units or silos (Coleman, 1981). Despite such penetrating analyses of higher education, particularly research-intensive universities, the impact of such work has been negligible and university silos have continued to build power structures around increasingly well-defined disciplinary boundaries. However, silos that protect power, vested interests, and the status quo also constrain innovation and creativity within universities as markedly as they do within communities. Interdisciplinary and multidisciplinary teaming, cross-unit appointments, and

multi-college reporting lines are organizational practices designed to eliminate or minimize silos in higher education and to replace linear-matrix models with more dynamic systems models of organizational process (Holland, Powell, Eng, & Drew, 2010). Paradoxically, universities are particularly well-suited to assist dissolution of community silos because universities can be perceived as neutral when mediating resolution of diverse community views. Bursting its historical silos, higher education in the 21st-century must be nimble, responsive to a rapidly changing landscape, armed to solve some of the most difficult challenges in human history, willing to walk into the unknown arm-in-arm with community partners (Furco, 2005; Janke & Colbeck, 2008), and effective in educating its students to be positive change agents of the future.

Higher education scholars have challenged the academy to involve itself in solution-oriented approaches to the 21st-century's greatest challenges (Boyer, 1990, 1996; Lynton & Elman, 1987), including infant mortality, failing schools, youth crime and violence, homelessness, access to health care, regional economic development, urban mobility, and access to higher education. Traditionally, universities have conveyed outreach messages to communities framed as "what we can do to solve your problems," thereby separating the community from the change process. Over the past 25 years, however, many voices have called for universities to engage with society as a partner in solving complex societal challenges (Boyer, 1996; Glass & Fitzgerald, 2010; Martinez-Brawley, 2003), framing such relationships around the question, "how can we solve these problems together?"

Further, penetrating the boundaries that traditionally separated people, expertise, and ideas within academia, and academia from community, creates the potential for these groups to collaborate on "problems that require the tools and knowledge of more than one field of study" (Simon, 2009, p 11). Although the increased abundance of knowledge has led to greater specialization, the world grant ideal calls for new combinations of academic disciplines, and for community partners to contribute their knowledge and experience to attain shared goals; that is, it calls for second-order transformative change in academia, including changes to the criteria used to evaluate faculty performance (e.g., clear goals, adequate preparation, appropriate methods, significant results, effective presentation, reflective critique; Glassick, Huber, & Maeroff, 1997, p. 36).

Michigan State University and the Power of We Consortium

The State of Michigan’s multipurpose collaborative bodies provide a case in point. In 1989, Michigan launched a systems change initiative, and established multipurpose collaborative bodies comprising diverse organizations and entities representative of community diversity as defined at the county level. The idea was to create community-based initiatives focused on sharing resources, developing communication networks, and effectively using county resources to advance quality of life for county residents (*Foster-Fishman, Salem, Allen, & Fahrbach, 2001*). For example, one multipurpose collaborative body, the Power of We Consortium, and Michigan State University forged a partnership to link the university’s knowledge capital to the Power of We Consortium’s knowledge capital and strategic goals for community change (*Fitzgerald et al., 2010*). The Power of We Consortium brings together more than 200 community agencies woven into 12 coalitions (a network of networks) to achieve first- and second-order changes that affect six indicator domains of community health and well-being: intellectual and social development, economy, health, safety, environment, and community life (see Figure 1). Across the six domains, 33 indicators are assessed to determine the extent to which Power of We Consortium networks and coalitions can be linked to the selected indicators of system change.

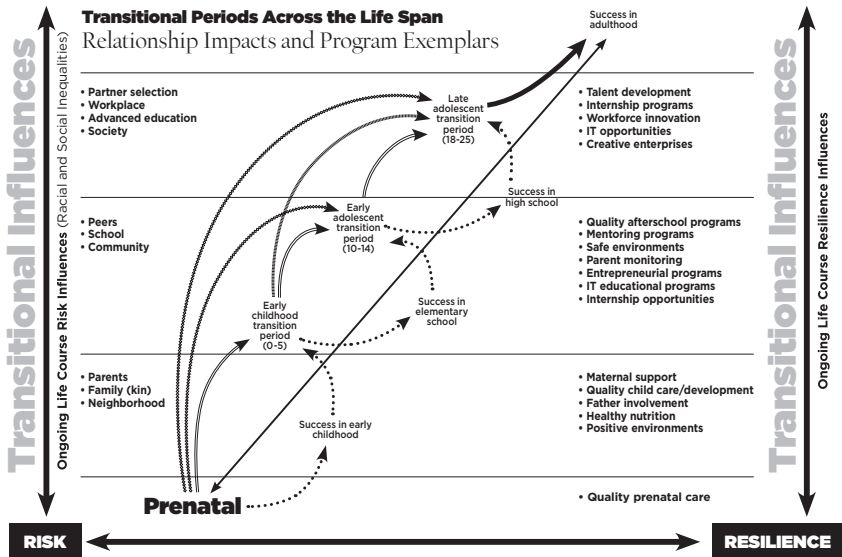


Figure 1. The Infancy to Innovation Framework for systems change. Adapted from Fitzgerald, H. E. (2010). *Birth to work: A community systems framework for systems change. The Engaged Scholar, 5*, 20-21. With permission of Michigan State University, Office of University Outreach and Engagement.

The Power of We Consortium's effectiveness derives from the diversity and inclusiveness of its members. Early on, the consortium recognized the potential for linking outcome categories of system change to its indicators of health and well-being through partnerships with higher education. However, the Power of We Consortium and Michigan State University needed to engage in joint problem solving before measures of system change could be developed and implemented. The partners needed to address how to link multiple and independent programmatic preventive-intervention efforts to population indicators of system change. For example, how does one use outcomes from widely diverse early childhood education programs to predict changes in community-wide indicators of school readiness? Even if it were possible to associate programs to community outcomes directly, what policies would have to be in place to regulate decisions about the allocation of resources to evidence-based programs?

Quite by serendipity, a team of Power of We Consortium and university faculty members found the unifying theme through a risk to resilience framework that provides a vision for building capacity from birth to early adulthood. The framework was developed over several years through a co-creative and dynamic process that focused on building a second-order change model to facilitate development of stronger connections to the diverse evaluation and research capacity of Michigan State University. Brainstorming led to conceptualizing change as requiring a foundation from infancy to adulthood as a way of characterizing the breadth of Power of We Consortium coalitions and agencies. The team conceptualized a birth to work *framework*, which they described in 21st-century terms as the *infancy to innovation* framework for systems change (Fitzgerald, 2010, p. 20).

An infancy to innovation framework.

The infancy to innovation framework illustrated in Figure 1 provides a means for all components of the quad-helix system (higher education, business and industry, government, and civil society) to focus collaboratively on policies and practices that can enhance health and well-being, particularly when well-being includes the production of an educated workforce. It also creates a common vocabulary that is meaningful both to community leaders from many sectors and to faculty members from many disciplines and fields. For example, characterizing three foundational periods as early childhood, middle childhood, and emergent adulthood, although accurate, does not reflect the core social, emotional,

cognitive, and neurobiological changes that thrust individuals on positive life-course pathways or divert them to negative pathways, as reflected by the risk-resilience continuum.

From a systems change perspective, successful life-course pathways are co-constructed by parents, supplemental childcare providers, good schools, safe neighborhoods, concerned neighbors, an engaged business community, and government programs that provide opportunities for children to hone the skills and talents necessary to achieve and maintain positive life-course outcomes. This requires hard work and the willingness of many organizations and specialized networks to seek integration by keeping a collective eye on the children and their families who are targeted beneficiaries of the collective Power of We Consortium effort. The infancy to innovation framework is unique in that it can be applied in any community because it is driven by co-creative processes that enable communities to uniquely determine system change goals and by partnerships necessary to achieve those goals. Moreover, because the infancy to innovation framework is a dynamic systems change model, a constant interplay occurs between proximal (here and now) and distal (past and future) activities and goals. For example, individual, family, and community assets assessed during infancy and early childhood influence proximal activities that are linked to distal big picture goals to be achieved. Because change occurs, the individual, family, and community assets of infancy and early childhood may or may not be relevant as assets for change during middle childhood or adolescence. Thus, systems change models require ongoing reassessment to ensure that the programs and practices generated continue to provide a good fit for the individual or any entity within the evolving system. From Dooyeweerd's (1955) perspective, one has to assess how perceptions of the aspects of things may have changed. The infancy to innovation framework is a generational system change model, and while the end goal may hold, movement through the dynamic system over time will require frequent revisiting of tasks accomplished, assets generated, and innovative practices and entrepreneurial investments required.

Ingredients for Success in University-Community Partnerships

Colleges and universities shape their methods of building community partnerships in ways that are consistent with their missions. For many public and land-grant research universities, scholarship-focused engagement is one such approach (Fitzgerald et al., 2010). At Michigan State University, the hallmarks of university-community

partnerships include being embedded in long-standing efforts to identify and to resolve community-defined needs, stressing solutions that are built from community assets, building community capacity for sustainability, facilitating development of collaborative networks (such as the Power of We Consortium), and assessing and benchmarking the outcomes of such partnerships (*Barnes et al., 2009*). Central to each of these aims is the notion that community, however defined, must be part of the co-creative process that underlies any efforts to generate systems change, and that such change must be based on agreed-upon metrics for evaluating change. Co-created metrics with proven success include those generated by community partners (Table 2) and those that have a more institutional focus (e.g., the degree to which projects are collaborative; the extent to which outreach and engagement are understood to address specific societal concerns and geographic areas; shared efforts to generate resources; the degree to which positive sustainable change occurs in the community; the impact on faculty scholarship and student learning; *Church, Zimmerman, Bargerstock, & Kenney, 2003; Lunsford, Bargerstock, & Greasley, 2010; Lunsford, Church, & Zimmerman, 2006*).

Table 2. Ingredients for success in university-community partnerships

An early success
Reconciliation of differences in community and university cultures
Co-creation as a foundational principle
Reciprocal, long-term commitment
Coherent, common community-building agenda
Candor and confidentiality
Effective co-management and coordination
Patient clarification and re-clarification of mutual expectations and benefits
Creative solutions to other challenges
Rewards, incentives, and support for both staff and faculty
Shared responsibility for long-term funding

In the 21st-century, this concept of community involvement extends beyond the immediate borders of the campus to any community in which the university involves itself in research and creative activities. Such a realization creates a plethora of resources and scholars. Theories and programs are tested in practice, sometimes immediately, in combination with quality improvement efforts to replicate successes and change or eliminate

failed approaches to transformational change. The overall result of such partnerships and co-creative processes is the development of sounder, better tested theories and proposed solutions. To seek and accept input allows communities and researchers to deepen their mutual understanding of challenges, which creates more innovative and comprehensive solutions and applications. The result is a scholarship-focused approach to community-university partnerships, one that readily embraces and implements each of the core land-grant values of quality, inclusiveness, and connectivity.

The Co-Prosperities of Place: Local to Global and Global to Local

The world has changed and become more complex. The 21st-century has ushered in unprecedented challenges to the State of Michigan, the United States, and world. Further, the interrelatedness of the world guarantees that these challenges are no longer ever *just* local. Place matters, but solution-focused efforts toward change at the local level can inform similar efforts elsewhere. Although place always involves boundaries and contexts that can easily make for closed systems, in the 21st-century place is less and less closed. For example, urban areas increase in population while rural areas decline; economies require regional solutions; health-care increasingly requires public solutions; education no longer is confined to classrooms; the transmission of culture and organization of political action reaches distant hearts and minds; and nearly all business and commerce is at some level global. The systemic connectedness of the globe, society, and people affects every action and choice tenfold.

In this environment, higher education has an opportunity to stimulate societal growth and development for the world and its inhabitants as never before. Knowledge as the means for enacting real, meaningful, and effective solutions has never been more necessary (*Simon, 2009*). Higher education, in conjunction with those outside the academy as well as those in the academy who have not traditionally addressed certain challenges, has the opportunity to improve quality of life in the world, and the potential to increase the greater good by building sustainable global prosperity.

The co-creative process is essential, particularly when working in diverse cultures. For example, when Michigan State University faculty member Gretchen Birbeck (*Epilepsy treatment, 2006; Zambia epilepsy, 2011*) began her study of epilepsy in Zambia, she noted, "I had no idea the burden of epilepsy I would find there, but I

quickly realized that to combat this terrible disease I would have to leave the hospital and go out and engage the community (2011, p. 34).” Utilizing ethnographic approaches in community contexts, she gained firsthand knowledge of how epilepsy was understood by members of the community and the depth of its stigmatizing influence within their culture. With a deeper understanding of the cultural context of epilepsy, Birbeck and her partners designed education and treatment programs and increasingly rigorous scientific research on the etiologic factors contributing to the high prevalence of epilepsy in Zambia and elsewhere. What began a decade ago as a local nurse–medical student partnership in one small rural Zambian hospital has grown into a program that supports and enriches clinical services and advocacy programs in partnerships with nurses and Chieftainess Mwenda of the Basanje Royal Establishment.

Birbeck’s local work in Mazabuka, Zambia, spread to many other countries of sub-Saharan Africa, and expanded to include studies of malaria, famine-related drug toxicity, co-morbid HIV and epilepsy, and drug access for people with epilepsy. The breadth of these efforts provided the impetus for Michigan State University to create the International Neurologic and Psychiatric Epidemiology Program, with Birbeck as its director. The collaboration at Chikankata Hospital involving epilepsy evolved into a major engagement scholarship partnership that has produced 60 publications, over \$2 million in funding, and significant changes in the quality of life for individuals with epilepsy in sub-Saharan Africa.

Similar stories are told by those at other universities. For example, the recipient of the 2011 C. Peter Magrath University/Community Engagement Award, Montana State University’s student chapter of Engineers Without Borders, partnered with the people of Khwisero District of Western Province, Kenya, to improve the water and sanitation facilities in local schools. The students not only had to concentrate on how to build potable water facilities, they had to build trusting relationships with people who differed greatly in culture, race, and social class. As was the case for Gretchen Birbeck in Zambia, partnership development was a critical pre-activity upon which the development and sustainability of the potable water project was dependent. Since 2004, its efforts have resulted in wells at seven schools, composting latrines at five schools, distribution pipelines, a health clinic, and a market, while involving over 75 students and generating substantial grant funding. Montana State University’s student chapter of Engineers Without Borders’ global experiences in Kenya have transferred to

local collaborative activities between Montana State University and the Tribal communities of Montana (*Stein & Schmalzbauer, 2012*).

Conclusion

In this essay, we have explored how engaged scholarship has evolved in research-intensive land-grant universities, like Michigan State University, and how the world grant ideal brings community engaged scholarship into focus. Having been part of the land-grant founding outreach mission, community-engaged scholarship has gained a 21st-century presence as an effective way for universities to test and refine the means by which they play a critical role in society. Once focused on agriculture and manufacturing, engaged scholarship now includes all disciplines, professional programs, institutes, and centers that compose the modern university. Under the umbrella of the world grant ideal, engaged scholarship offers the potential for universities to serve as engines of societal growth the world over, in an endless cycle of learning, teaching, learning, and accomplishing. Engaged scholarship has a place in all disciplines that strive to put theories and research into practice, and that value blending academic and community knowledge to solve community problems while simultaneously adding to the corpus of proven practices through reliance on methods appropriate to knowledge discovery and knowledge application.

At Michigan State University, the Office of the Associate Provost for University Outreach and Engagement supports generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences through a scholarly model of outreach and engagement that fosters a reciprocal and mutually beneficial relationship between the university and the public. By engaging with societal issues, Michigan State University is able both to aid society near and far, and to increase the knowledge base about these issues, including both their causes and their solutions. By using discovery and application approaches to knowledge generation, faculty members are able to succeed as scholars, and communities can achieve solutions to a wide range of problems associated with health and well-being, K-20 (kindergarten through college) education, transportation systems, innovation centers and entrepreneurial needs, information technology and knowledge economy, and business startups. Involving students in such projects deepens their understanding that quality, inclusiveness, and connectivity are core to their civic responsibilities within a democratic society. Such outcomes are also core to the idea that universities must be anchor institutions to communities,

contributing to the revitalization of societal problems wherever they exist, and working collaboratively with communities to effect sustainable solutions (*Lynton & Elman, 1987*). But to achieve these goals, at minimum, a university must

- align itself so that engagement scholarship cuts across its mission and is an acceptable form of faculty scholarship and student learning;
- provide professional development programs designed to prepare faculty members to engage in community-based research;
- create opportunities and experiences for undergraduate and graduate students to learn about their disciplines outside the classroom in situations where they must simultaneously learn about other cultures and peoples as well as learn more about themselves;
- emphasize the scholarship of integration in both its multidisciplinary aspect and its teaching-research-service integration aspect;
- identify the institutional values that will guide the collective engagement activities of its students, faculty, administrators, and other employees; and
- embrace the global frame guiding the transformation of higher education in the 21st-century.

More than ever before, changes throughout the world have created the potential for universities to engage with society through research and scholarship to benefit knowledge generation and application, as well as the global population (*Bjarnason & Coldstream, 2003*). The potential for universities to drive societal growth and development for the greater good of the world and its inhabitants has never been more appropriate or necessary. Knowledge and understanding of the world and its current and future needs will allow humanity to move the world toward greater good (*Simon, 2009*). But this knowledge and understanding of the world must be useful to society.

At Michigan State University, the concept of scholarship for the benefit of individuals as well as the State of Michigan, the United States, and the world permeates the university's history. Adapting the core values central to traditional land-grant ideals and practices to address the broad challenges of the 21st-century is an imperative independent of institutional type or societal sector. It is an

imperative with societal urgency—locally and globally. This is the power and relevance of the world grant ideal and its integration with engagement scholarship.

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Sometimes There are No Notes: An Auto Ethnographic Essay of a Collaboration at the Engagement Interface

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and John H. Schweitzer

Abstract

This autoethnographic essay represents the authors' critical reflection on their experiences partnering with Liz Lerman and Dance Exchange (a dance company) artists on a collaborative evaluation of *The Matter of Origins*, a contemporary art and science dance performance. They describe meaningful moments in their collaboration and reexamine those pivotal experiences in the broader context of scholarly community engagement. Based on their reflections, the authors identified themes including ethnographic approaches to collaboration, shared systems of meaning, and developmental evaluation to understand the complex experiences that took place at the engagement interface. The essay concludes with suggested reflective questions for scholars to consider in their own community engagement activities.

Introduction

In your collaborative work with communities, have you ever found yourself working in a context new to you or with partners whose ways of knowing were distinctly different from your own? Has the work pushed you beyond your prior experience? Have you been stretched beyond your comfort zone? Have you had to gain new knowledge and skills just in time? If so, then you have likely realized that your community engagement activities are taking place at the *engagement interface*, the dynamic, evolving, co-constructed setting where collaborators from the academy and society engage each other in communities of inquiry (Fear, Rosaen, Foster-Fishman, & Bawden, 2001, p. 27). This autoethnographic essay is our (the authors') way of making sense of the unpredictable and complex experiences of collaboration at the engagement interface.

As the community engagement movement has moved from the margins of the academy to the mainstream, it is natural that faculty members' writing about community engagement has transitioned from an "emphasis on what is done and accomplished by and through its execution" to more personal and professional expressions of what it means *to be* and *feel* engaged (Fear, Rosaen, Bawden, & Foster-Fishman, 2006). Fear and his colleagues point out that

“To engage” speaks to us in ways that other words, such as community development, community service, and community research, do not. There is an “outside of oneself” feeling about those words—executing the development of, providing service to, and conducting research *on*—that contradicts what we have found engagement to be, namely a deep personal expression *with others* in a shared pursuit that is life altering, if not transforming. (p. 4)

Faculty members often write accounts of their transformative experiences at the engagement interface in the form of autoethnographic narratives (Diener & Liese, 2009; Fear et al., 2006; Mitchell, 2008; Thering, 2010). Ellis and Bochner (2000) defined *autoethnography* as a genre of “writing and research that displays multiple layers of consciousness, connecting the personal to the cultural” (p. 733). They list a range of closely related autoethnographic practices, including narratives of the self (Richardson, 1994), self-stories (Denzin, 1989), first-person accounts (Ellis, 1998), personal ethnographies (Crawford, 1996), reflexive ethnographies (Ellis & Bochner, 1996), and ethnographic memoirs (Tedlock, 1991). Regardless of terminology, these approaches share a common commitment to revealing the author’s discoveries and epiphanies using “thick, rich” description (Geertz, 1977; Saldana, 2003). In other words, autoethnographies convey moments when an individual’s awareness deepens and a new way of understanding emerges from critical consideration of particular experiences (Humphreys, 2005). Autoethnographic writing intertwines “two landscapes simultaneously,” the outer landscape of action and the inner landscape of thought (Bruner, 1986, p. 14). This critical consideration of experience is what Schön describes as a practitioner’s reflection *in* and *on* action, a disciplined approach “to observe ourselves in the doing, reflect on what we observe, describe it, and reflect on our description” (Schön, 1995, p. 30).

In this autoethnographic essay, we critically reflect on our 2-year experience partnering with a community-based dance organization on a collaborative evaluation funded by the National Science Foundation (NSF). After a transformative experience collaborating with Liz Lerman and Dance Exchange artists, we decided to write about our experiences and co-author this reflective essay. Throughout this essay, we use *moments* to exemplify our experiences (outer landscape) paired with *reflections* to examine the meaning we made of those experiences (inner landscape) (Bleicher & Correia, 2011). Our writing illustrates a deepening

awareness of the dynamic interplay between us (the evaluation team) and our community partners (Liz Lerman and Dance Exchange artists). Our critical reflections revealed themes that included ethnographic approaches to collaboration, shared systems of meaning, and developmental evaluation to understand complex experiences that took place at the engagement interface. Through the essay, we hope to convey the richness of our experience collaborating with Liz Lerman and Dance Exchange artists. We describe our “ah ha” and “oh no” moments that led us to a deeper understanding of our collaboration and to the imperative of critical reflection for sense-making in complex environments.

This essay is written from the combined perspective of the evaluation team, which included a researcher, a graduate student, and a professor—all from Michigan State University. We relate stories and ideas that emerged from our autoethnographic data, including dialogues among the evaluation team, research and field notes, phone conversations with our community partners, site visits to the dance studio, and attendance at 17 performances during the 2010–2011 and 2011–2012 seasons at five evaluation sites: University of Maryland, College Park; Wesleyan University; Montclair State University; Arizona State University; and the Museum of Contemporary Art Chicago. The essay’s focus is on our unfolding relationship with the Dance Exchange and not on the findings of our collaborative evaluation, which are published elsewhere.¹

Liz Lerman and the Dance Exchange

In 1976, choreographer Liz Lerman founded the Liz Lerman Dance Exchange as a contemporary dance company, think tank, and action lab—a place where dance is not reserved for an elite few or for highly trained dancers only. Instead, the Dance Exchange is a place where multiple voices of different generations, class backgrounds, and ethnicities come together to explore and create movements with meaning. Through the years, Liz Lerman has made dances *with* and *for* nursing home residents, shipyard workers, university students, professional dancers, and scientists. Her dances have explored topics such as pollution, genocide, and the human genome, and have celebrated life’s seminal moments, including motherhood, death, and the turn of the century. Liz Lerman believes that “art is powerful and dance can make a difference” (*Lerman, 2011, p. xv*). For her pioneering approach, including the belief that “everyone can dance,” she was named a MacArthur Foundation Fellow for community organizing in 2002.

The Dance Performance: *The Matter of Origins*

Following an animated keynote speech about *Ferocious Beauty: Genome* (an art/science performance about the Human Genome Project), Liz Lerman was approached by University of Michigan physicist Gordy Kane, who asked her to consider making a dance about another science topic—physics. In her conversations with him “about beginnings, about matter, about mystery, about math,” the questions driving her piece, *The Matter of Origins*, began to take shape (Lerman, 2011, p. 13). After almost 3 years of reading, of visits to laboratories in the United States and Europe, of conversations with the world’s leading physicists, and of studio work with dancers, *The Matter of Origins* coalesced into a two-act contemporary dance performance exploring stories, images, and movement related to spiritual and scientific explanations of the origins of the universe (*Dance Exchange*, 2011).

In Act One, the audience experiences a stage performance by an intergenerational dance company, which, in addition to the dancing, includes multimedia images from the Hubble Space Telescope, video footage of leading physicists, photographs of Marie Curie, and readings from the Book of Genesis. In Act Two, the audience adjourns to a nearby tea room for hot tea, chocolate cake, and more dancing by local dancers and Dance Exchange artists. A Dance Exchange artist and a local physicist play the role of tea room hosts, welcoming audience members and emceeing the tea. At each tea table, provocateurs (community volunteers with discussion guides to spark conversation and reflection) convene dialogues about the performance and the ideas behind it.

To support *The Matter of Origins*, Liz Lerman and the Dance Exchange won a National Science Foundation/Informal Science Education/EArly-concept Grants for Exploratory Research (EAGER) grant for the implementation of Act Two and for an evaluation. In the Informal Science Education programming area, NSF seeks to strengthen “interest in, engagement with, and understanding of science, technology, engineering, and mathematics (STEM) by individuals of all ages and backgrounds through self-directed learning experiences” (Friedman, 2008, p. 9). In particular, NSF is interested in how informal science education, and in this case, informal art and science education, contributes to positive changes in individuals’ attitudes, interests, knowledge, behaviors, and skills related to science. The hope is that state-of-the-art exhibitions, youth and community programs, television and radio productions, and technology-based and cyber-enabled learning projects will increase STEM literacy and inspire the next

generation of scientists (Bell, Lewenstein, Shouse, & Feder, 2009; Fenichel & Schweingruber, 2010; Mintzes, Wandersee, & Novak, 1999).

The Collaborative Evaluation

As we began this collaborative evaluation, we were aware of some broad parameters. For example, our contract with the Dance Exchange was for 2 years. Liz Lerman and Dance Exchange artists expected us to evaluate four, perhaps five, performances during that time period. We knew that the evaluation needed to address NSF's questions at the minimum. We had a hunch that our community partners wanted to know more about the connections between art and science as well. We evaluators saw this as an opportunity to learn more about public engagement with the sciences through the arts and about creativity. These requirements, expectations, and wishes, swirling around in our heads, would have to be reconciled as the collaborative evaluation plan took shape.

Meeting Our Community Partners

In 2010, shortly after NSF awarded the grant to the Dance Exchange, we evaluators made our first trip to Washington, D.C. to meet our community partners. The Dance Exchange invited us to their studio for the Tea Intensive, a 3-day workshop for dancers from the local area in late August (Levitt, 2010). We were anxious to understand what *The Matter of Origins* was about and to develop an evaluation design, instruments, and questions. The premiere was scheduled for early September 2010 at the University of Maryland, College Park, one of the institutions that had commissioned the dance.

We were up to the challenge, but the pressure was on. We knew we needed to return from the Tea Intensive with decisions about the evaluation design, instruments, and questions, if possible. Jane Hirschberg (the Dance Exchange's managing director at the time) met us at the airport. We were wowed by her immediate and genuine hospitality, which included lunch at a restaurant serving local and organic food just a few blocks away from the Dance Exchange studio.

Moment: Tea Intensive. Dance Exchange Studio. August 20–22, 2010. After lunch, we walk to the Dance Exchange's studio, where the afternoon sessions of the Tea Intensive are about to begin. We enter through the back door, walk past a low couch and a kitchen

area, and are shown into the big studio room. We add our shoes to the pile at the door before we enter the studio, which has mirrors on the long walls and a glass window on the shorter wall separating the studio from the hallway. Everyone gathers in a big circle around the room for a round of introductions. We are greeted by dancers with a variety of complexions, who are young, old, and in between; male and female; slight and muscular. Everyone is very friendly, but the feeling is that this is a working day, not a social one. And it's time to get back to work. We evaluators excuse ourselves and watch through the glass wall for a while.

Dance Exchange performers lead small groups of dancers from the greater Washington, D.C. area and the University of Maryland, College Park in improvisational exercises. They break into small groups and are given an assignment, such as make a dance with a teacup. Each small group comes up with different moves, showing one another ideas, building upon each other's movements. Then time is up. The groups all gather in a big circle to show one another the movements they had created. Liz and other Dance Exchange artists watch intently, with great concentration. Once in a while, they ask a dancer to repeat a movement. And then, it's time for another assignment. The process repeats itself for most of the afternoon, until there's a "bio-break," to visit the restroom or have a snack.

During the break, the studio is re-set with round tables that seat eight and folding chairs, and a performance area in the middle set with a long, narrow table, high chairs, and teacups. A different kind of rehearsal begins. Dancers stand around the edges of the room performing a specific sequence of movements, and then circulate throughout the room and dance in and around the tea tables. Practice starts and stops. Something isn't quite right. Movements and timing are re-adjusted. They start again and stop again. They repeat these practice movements until the dance sequence starts to flow.

Reflection: This isn't what we thought a rehearsal would be like. We are not dance professionals, but it doesn't seem like they are rehearsing a set sequence of movements. Instead, it seems like they are experimenting with different moves. Then it dawns on us: The choreography for Act Two isn't finished yet. It's still in the process of being worked out. The Tea Intensive dancers are part of the creative process with the Dance Exchange—everyone is collaborating on what might become the choreography for Act Two.

Unknowingly participating in an evaluation intensive.

At some point, we stopped watching the dance rehearsal and found seats at a table at the end of the hallway. We were just on the other side of the glass wall. If we glanced up from our work, we could see the dancers. We could hear the music—start and stop and start again. We talked about what we might do for the evaluation. We brainstormed potential questions that might be asked about dancing, art, science, creativity, physics, and the connections among them. We thought of different ways to collect the audience members' responses—written surveys, iPad applications, clickers (handheld electronic voting devices) in the theater, sketches on napkins. We debated different approaches to the evaluation and discussed what we wanted to know, what NSF wanted to know, what the differences between the two were, and how we might overcome those differences. For 3 days, we went back and forth about what should be done for this evaluation.

These evaluation conversations were some of the most intense, concentrated intellectual work we had ever done. In retrospect, we realized that the process of developing the evaluation design, instruments, and questions paralleled the creative process used with the local dancers during the Tea Intensive workshop. We had unknowingly participated in an evaluation intensive. We were given an evaluation assignment, went off in a small group, and brainstormed different options. We ran our freshly developed ideas by Liz Lerman and Dance Exchange artists. They listened intently, considered our suggestions, kept some, and dismissed others. Early in the conversations, more ideas were dismissed than kept. Later, more ideas were kept than dismissed. Liz Lerman and Dance Exchange artists refer to this moment—when the creative process of “freewheeling experimentation and development” transitions

to “the refining and condensing of actual content” as flipping the funnel (Borstel, 2004, p. 24).

Flipping the funnel: Knowing through experimentation.

With feedback from our community partners, we started another round of conversations, based on a better understanding of what they needed and wanted. We met in the glass hallway, the main studio, the upstairs offices, and over meals at our hotel. After 3 days of intense conversation, we came to understand our community partners’ parameters for the evaluation. The primary goal: The evaluation needed to be rigorous (NSF’s criterion) but could not disrupt the audience members’ experiences of the performance (Liz Lerman’s criterion). Through cycles of experimentation, some parameters for the evaluation emerged:

- Surveys had to take place outside the theater space (in the lobby before the performance and during intermission), especially for Act One.
- To the extent possible, surveys or other data collection methods would need to be creatively embedded in Act One and Act Two. In other words, they were not to be a separate activity interrupting the flow of the experience.
- If surveys were to be used, the design elements would need to mirror the themes of the performance. Different shapes, colors, and textures would need to be considered, along with layout and design elements that echoed performance themes.
- Special attention would need to be paid to the survey language. Audience members could not be asked questions that would make them (even unintentionally) feel they were not smart enough to attend the event.
- Surveys could not take long to complete, as audience members would be checking coats, visiting with friends, buying refreshments, or participating in other activities prior to the performance and during intermission.
- The final survey could not occur at the very end of Act Two. The performance should end with dancing and music (not a survey).

We learned that each performance site would have different configurations for Act One and Act Two. At the University of Maryland, College Park, Act One would take place in a theater and Act Two would take place in three different tea rooms simultaneously. At Wesleyan University, Act One and Act Two would be combined into a hybrid tea, a performance taking place in a tea room setting only. At Montclair State University, the theater's stage used by dancers in Act One would be reset during intermission as a single tea room for Act Two. At Arizona State University, Act One would take place in a theater, with Act Two taking place in two separate tea rooms, one of which would be a balcony opening up to the out-of-doors. At the Museum of Contemporary Art Chicago, Act One would take place in a theater, with audience members seated in a T-shaped exhibition area for Act Two. These variations in the physical characteristics of the performance sites necessitated site-specific evaluation designs.

Practicing an ethos of dialogue.

During these conversations with our community partners, we discussed our evaluation expectations. John Schweitzer, for example, talked about how strong evaluation designs make use of comparison groups. The strongest evaluation design compares groups that experienced something (i.e., the treatment group) with groups that did not (i.e., the control group). For our evaluation, a treatment/control group design would not be possible; however, we could build in comparison groups in other ways. We could compare audience members' attitudes, interests, knowledge, and behaviors at different times (e.g., pre-performance, intermission, post-tea, six months post-performance). We could use different evaluations in the different tea rooms, especially if audience members were randomly assigned to the tea rooms. We could use different instruments on different performance nights.

Diane Doberneck talked about the need for both quantitative and qualitative data and about opportunities to collect qualitative data creatively. Paula Miller suggested collecting information about audience members' prior experiences (e.g., background in science, dance, informal science education) and socioeconomic positions (e.g., race/ethnicity, gender, age), which inform their ways of knowing, filter their understandings, and shape their interactions with the world (Collins, 2000; Smith, 1991 ; Zinn & Dill, 1996). These background experiences and socioeconomic positions could influence the audience members' perceptions of *The Matter of Origins*. Thus, we needed to collect this data to see if patterns emerged

during data analysis, particularly for groups traditionally underrepresented in the sciences (a priority for NSF).

Throughout these conversations with our community partners, we listened to one another, asked open-ended questions, and shared perspectives about the evaluation design, instruments, and questions. This way of interacting is called *dialogue*. It is characterized by open-ended conversations with understanding and the generation of new ideas as the goal, in contrast to discussions or debates, where convincing others of one's point of view is the goal (Fear & Doberneck, 2004; Isaacs, 1999). In our collaborative evaluation, we practiced inquiry (asking questions to understand the other's perspectives) and advocacy (sharing details to be sure our positions were clearly understood). This inquiry and advocacy approach is possible when assumptions are suspended during dialogue and when everyone enters the dialogue with minds open to others' ways of knowing (Senge, Kleiner, Roberts, Ross, & Smith, 1994). We felt that this approach was vital to the success of our collaboration.

Realizing that sometimes there are no notes.

Over the 3 days of the Tea Intensive, we spent most of our time at the Dance Exchange studio. We worked at the small table in the glass hallway, took our breaks in the kitchen, and flopped down on the couch for tea breaks. When invited, we left our shoes at the door, entered the studio, and played the role of audience members so that the dancers could dance around real people as part of their creative process. We watched, listened, learned, and asked questions. Generally, we hung around as a way of immersing ourselves in the Dance Exchange's activities and of getting to know our community partners and their work. "Face-to-face encounters and gatherings are crucial to establish a valid connection between people, probably because they allow a more accurate understanding of what people really think and feel" (Gilchrist, 2009, p. 92).

Although our face-to-face interactions gave us some grounding in our community partner's creative processes, we were not completely sure what *The Matter of Origins* was all about. In particular, we still had questions about the science ideas embodied in the performance. With NSF's emphasis on science knowledge as an outcome of informal science education, we had to figure this out if we were to ask the audience members about the science ideas they saw during the performance. If Act Two was still under development, maybe Liz Lerman could talk to us about Act One. As the Tea Intensive workshop concluded, we asked to spend a little time

with her so that she could tell us about the science embodied in *The Matter of Origins* performance.

Moment: Last day of Tea Intensive. Dance Exchange Studio. August 22, 2010. We take our shoes off and are ushered into a small studio room behind the kitchen, where we sit on hastily arranged folding chairs facing a small TV on a short table. We have to lean forward toward the TV to see and hear what's going on in the video. It's the first time we get to see any parts of Act One, and we are full of hope that Liz will "tell us what's happening" during each segment of the performance. After this session, we will finally have the explanation we need about how the science concepts are embodied in the dancing, and we'll be able to design the evaluation.

We watch intently, chairs scooted forward. For the first time, we see dancers extending their bodies and arms in long lines. As our eyes move along their bodies from the bottom left to the top right, we see that the dancers are perfectly lined up so that as the eye moves along their bodies to their fingertips, blue lines of light seem to extend from their fingers and keep going on the background screen. Music and lighting change suddenly. We see individuals and groups of dancers running full speed and knocking into one another in great crashes and falls. It is high energy and pure chaos. Music and lighting change again. We see a serene sequence of gentle dancing, with male and female dancers as partners moving slowly to music with stars projected in the background. Music and lighting change again. We see huge black-and-white photos of Marie Curie on the background screens. The female dancers are making motions as if they are stirring large pots of thick liquid (not until later when we hear the voiceover for this section is it clear that this scene depicts Curie's discovery and creation of radium from boiling vats of pitch). The dancing continues to shift, with dramatic transitions of lighting and music.

As we watch the video of Act One rehearsals, Liz talks to us about her conversations with world-renowned physicists. She tells us about the importance of big science and that these kinds of experiments, like those taking place at Europe's Large Hadron Collider, require the resources of many countries to conduct—they are too big for any one company or even any one government to finance. She tells us about the limitations of science as a way of knowing and that despite the very best measurements, there is still so much uncertainty in what we can know, for sure, absolutely, precisely. She tells us her personal story about the Manhattan Project and how the bomb ended the war, brought her father home, and made her life possible. Together, with dancing on the small TV, we ponder what it means to have something as terrible as the bomb be thought of as something that brought peace. These are very big thoughts, fraught with questions about what each of us believes, knows, and thinks about how the world works.

Reflection: We are blown away by the dancing in Act One, especially how the choreography is so seamlessly blended with the audiovisual elements and the music. We weren't expecting that. It is a gift of Liz's time when she shares some of her thoughts behind the piece with us, and we are truly grateful for that, especially since the Dance Exchange is in the midst of an intense period of creation and rehearsal. We know how valuable her time must be right now. But we are worried. In our conversation, we did not hear Liz say anything like, "In this scene, the dancers are portraying the Big Bang, and in this scene, when you see them spinning around and crashing, they are pretending to be atoms in the Large Hadron Collider at CERN."

Moment: We ask Liz, "Is there a script, like you would have in a play? Or a libretto, like you would have in an opera? Is there some set of notes, annotating the scenes?" Liz says no, though there have often been requests for that kind of explanation for her pieces. She is torn about writing them. Part of the audience members' experience is emotional and aesthetic. Having a script, especially in

advance, takes away from that experience. She says that they are working with a dramaturge on the words that appear in the performance; however, *there are no notes about what each scene means.*

Reflection: We are amazed by this. After seeing the Act One rehearsal video, we come away with a profound sense that something special, perhaps transformative, is happening in this piece. At the same time, we have a deep-seated concern: We cannot name “this something special” . . . and without naming it, we are not sure we can evaluate it . . . and we have less than 3 weeks until the first performance.

Employing Ethnographic Approaches to Collaboration

As we wrapped up and returned home from our community partners’ Tea Initiative workshop, we knew that there was much work to be done to finalize the evaluation plan. We would have to rely on someone within the Dance Exchange to help us finish. Humanities Director John Borstel became our main contact with Liz Lerman and Dance Exchange artists. He shared our ideas with them and provided us with their feedback. Through e-mails and phone calls, he served as a bridge between us and our community partners. John provided us with information about the performance as it evolved. In parallel, our evaluation plan co-evolved with the performance during the few weeks between the Tea Intensive and the premiere in Maryland.

After Liz Lerman, Dance Exchange artists, and we evaluators decided on the evaluation design (one pre-performance survey, two different intermission surveys, two different post-tea surveys, and one delayed post-performance survey), John Borstel played another important role in finalizing the instruments and questions. He helped us ground-truth the evaluation materials (*Williams, 2004, p. 28*). For example, we would propose questions about science knowledge; he would review them with Liz Lerman and Dance Exchange artists to make sure the questions, especially the language, resonated with them and embodied the themes they envisioned for the performance. In this way, Borstel helped us confirm that what made sense from our evaluators’ perspective coincided with what made sense from an artistic perspective.

As our key informant, John also made sure that the design of the evaluation instruments echoed the performance themes. Instead of calling them *instruments*, we decided to call the surveys *measures*, mirroring the measurement theme in the performance. The local dancers who distributed and collected the measures at pre-performance and at intermission wore aprons covered with notes and sketches by physicists. In these ways and others, the measurement moments were in sync with the performance.

After the first set of measures was ready, we continued to spend as much time as we could with our community partners. We attended the dress rehearsal at the University of Maryland, College Park, so that we could see firsthand how the measures worked with a live audience and be ready to make any last-minute changes.

Moment: University of Maryland, College Park Dress Rehearsal. September 2010. John Schweitzer flies in from Detroit and arrives at the hotel where the dancers are staying. At check-in, he receives an urgent message to contact Amelia Cox (the Dance Exchange's creative producer and production manager at the time) right away. He goes immediately to the theater, tracks down Amelia, and learns that the iPad application to collect information from the provocateurs at each table could not be downloaded onto all of the iPads. Something else would have to be done. John works with Amelia, John Borstel, and Kelly Bond (assistant to the directors) to create a paper survey, make copies, and distribute them to each tea table—all before the dress rehearsal starts. Problem solved.

Back in the preparation room, John Schweitzer mingles with provocateurs who are getting last-minute instructions about the paper surveys. Some are relieved not to have to fuss with the iPads. John helps Dance Exchange staff prepare woven basket trays with blank surveys, golf pencils, and chocolate kisses. And then, it is time. Each local dancer gets a tray and heads out to the lobby to gather the first survey data. The local dancers are dressed in all black, with white aprons covered in equations, electron orbits, and lecture notes from physicists in dark blue ink, which matches the blue ink on our surveys. It's all seamless.

Reflection: We weren't sure how the lobby surveys were going to work. Would audience members complete them? Would their writing be legible? Would they leave us their e-mails for a follow-up? Would we learn what we wanted to know? In no time at all, we know everything is going very, very well. The local dancers flash big smiles and approach the audience members with the measures. Audience members are pleased to complete a lobby survey for a chocolate kiss. Some people act amused. By the start of Act One, we have stacks of surveys to package up and send to Michigan State for analysis.

After the University of Maryland, College Park performances in fall 2010, we had enough data to enter, analyze, and report to our community partners before the spring 2011 performances. We were committed to getting the data back to them quickly and in a format useful to them. We visited the Dance Exchange in person in the late fall to present the draft findings. We asked Liz Lerman and Dance Exchange artists if there were other aspects of the performance they would like us to focus on as we developed measures for future performances. We asked these questions as a sign of respect for our community partners; we understood that there is a "need to maintain mutuality" in relationships. According to Gilchrist (2009), "this does not necessarily mean that within each and every transaction there has to be an equal balance of give and take, as this is not always possible" (pp. 92-93). Over the course of our relationship, however, we knew it was important to have a balance of give and take between us and our community partners. We worked to ensure that we were giving the data back and not just taking data from the performances.

Critically reflecting on the early stages of our collaboration with Liz Lerman and Dance Exchange artists, we realized that we were strongly influenced by ethnographic approaches to collaboration, which include prolonged engagement with the group; participation or observation of behaviors, customs, and ways of life; immersion in the group's natural setting; close collaboration with key informants; and reciprocity predicated on developing rapport and gaining trust (Creswell, 1998; Hammersley, 1992; Mitchell, 2007). We spent time with our community partners at their studio, in the hotels where artists stayed, and at the theaters where the rehearsals and performance were held. We followed their rituals and routines (e.g., shoes off at the door, "bio-breaks"). This prolonged

engagement allowed us to learn authentically about our community partners, to observe their collaborative approach to making dances, and to begin to appreciate the context in which they worked.

Discovering new social worlds “can only be achieved by first-hand observation and participation in ‘natural’ settings, guided by an exploratory orientation” (*Hammersley, 1992, p. 12*). We identified a key informant from the Dance Exchange (John Borstel) as a trusted source for insight into the workings of the group, as a guide for appropriate interaction behaviors, and for establishing credibility with our community partners. He worked with us to make sure what we proposed for the evaluation made sense on the ground, used language that was appropriate for the audiences, and was reflective of the performance themes. We used dialogic practices to suspend judgments, actively inquire about other perspectives, and explain our ideas—all the while developing rapport and building trust with our community partners. That Liz Lerman and Dance Exchange artists are so deeply committed to collaborative artistic practice made this so much easier for us.

Discovering Shared Systems of Meaning

Despite using ethnographic approaches, we struggled to understand what Liz Lerman and Dance Exchange artists were hoping to achieve with *The Matter of Origins*. We were challenged to evaluate the audience members’ experiences in a way that met NSF’s rigorous evaluation requirements, and, at the same time, did justice to the creativity of the dance. We needed another way to approach the evaluation, especially since the science ideas were not neatly mapped out, scene-by-scene, in the performance. It was unlikely that we would collaborate with our community partners to develop a logic model, diagramming the linear relationship between what the audience members saw in Act One and experienced in Act Two and what they were supposed to get from the experience. *The Matter of Origins* was a different kind of experience, and as a result, the evaluation would need to be a different kind of evaluation.

Instead of taking an instrumental approach to the evaluation, we opted for a more interpretive approach. We developed the evaluation inductively, using techniques to discover the meanings audience members assigned to their experiences (*Denzin, 1989; Geertz, 1977; Holstein & Gubrium, 2005; Maines, 2000*). We abandoned the idea that what audience members would experience could be known in advance, and realized that their interpretations might be many and varied. We focused the evaluation on uncovering their

multiple interpretations and meanings. In other words, we learned about the audience members' experiences of *The Matter of Origins* from the audience members themselves. We gathered data about audience members' interpretations, and from that data empirically derived future evaluation designs, instruments, and questions. By approaching the evaluation without presupposed categories, we were open to the complex ways in which audience members constructed their social realities, assigned meaning to their experiences, and interpreted the performances.

At the University of Maryland, College Park performances, we used open-ended questions at intermission and at post-tea. On the intermission measures, we asked, "What struck you most about the performance?" On the post-tea measures, we asked, "What struck you most about the tea?" Based on thematic coding of the responses, we developed more questions at subsequent performance sites. For example, at Montclair State University performances, we gauged audience members' reactions to Act Two with a tea scale, eight Likert-scale questions about the impact of Act Two on audience members. We continued to ask open-ended questions. At Arizona State University and at the Museum of Contemporary Art Chicago, we asked open-ended questions about the science content. On the intermission measures, we asked, "What science ideas, if any, did you see during the performance?" On the post-tea measures, we asked, "What science ideas, if any, did you see during the tea?" This inductive, interpretive approach allowed us to be exploratory and discovery-oriented and, at the same time, to move forward with the evaluation in a purposeful way. Through thematic coding of the open-ended questions, we immediately realized that this interpretive stance would reveal multiple, sometimes wildly different, interpretations of *The Matter of Origins*.

Moment: University of Maryland, College Park. Opening Night. September 10, 2010. Two thirds through Act One, the lights come up and the audience sees a lone chair. Four cast members approach—three men, one woman. In the background, close-up, grainy black-and-white images of the woman's face flash across the screens. In some, she is staring blankly into the audience, showing no emotion. One long fluorescent light hangs at an odd angle from the ceiling. The rest of the stage is eerily quiet and stark. The woman climbs up on the chair, stands there momentarily. The chair is tipped backward abruptly by one of the male dancers. She falls.

She climbs back up onto the chair, stands there momentarily. The chair is pulled suddenly out from under her by one of the male dancers. She falls. She is caught and lowered to the floor. She climbs back up onto the chair, stands there momentarily. The chair is jerked, jerked again, jerked again until she is knocked from the chair by the jerking motions the male dancer makes. She falls. She is caught and lowered to the floor. She climbs back up onto the chair, stands there momentarily. A male dancer climbs up onto the chair, pushing her out of the way, onto the floor. She falls. She climbs back up onto the chair, stands there momentarily . . . the scene repeats until the stage lights go down.

Reflection: After seeing this scene at the University of Maryland, College Park, we talk about what we think it means. Paula immediately notices the gendered aspect of the scene. Male dancers are knocking the female dancer off the chair. The scene is violent and the woman seems almost in a trance as she repeats the motions. Diane focuses on the repetition. The initial situation seems to be the same—a woman on a chair—then something different happens each time. This speaks to her of variation in experimentation. John Schweitzer notices that the same thing can be accomplished in many different ways—knocking over, tipping, jerking—but it’s the interaction between the female dancer and the male dancers that changes the results. Among the three of us, we do not agree on what this scene means or represents.

Moment: Museum of Contemporary Art Chicago. November 10, 2011. At a tea table one evening, an audience member requests that the provocateur call the female dancer over to the table to answer some questions about the chair scene. When the dancer comes to the table, the audience member asks her, “What does that scene mean?” Adeptly, the dancer asks back, “What do you think it means?” The audience member talks about the violence of the scene and how it seems that the woman is thrown over and over again from the chair. She even seems to be getting back up on the chair reluctantly, like she is being coerced or forced somehow.

The dancer says that that is one way of looking at the scene. She shares that even among the dancers performing the scene, they do not agree on what it means. She does say that the scene would probably look different if it were a male dancer on the chair and female dancers knocking him off. A male audience member at the table chimes in. He says, “As a scientist, I have never thought about what the material I use in my experiments must feel like being experimented on. I just haven’t considered that before.”

Reflection: We have all seen the same scene, but it signified something different to each of us. We assigned it completely different meaning, which makes me think that in a way, maybe none of us actually “saw” the same thing. We do not have a single shared interpretation of the scene, but we do have something in common, even if it isn’t a shared meaning. Each of us has paused after seeing the chair scene and has thought more deeply about it. We were left with lingering questions.

Liz Lerman published her book, *Hiking the Horizontal: Field Notes from a Choreographer*, with Wesleyan University Press in 2011. We immediately bought copies, and read about Liz’s lifelong commitment to making dances that matter. In her introduction, she says,

it took a while to understand that [questioning] could be a way of life, a way of making art, a way of making space for others to engage in conversation of naming things, to encourage dialogue, of reordering ideas, or of making something useful or beautiful or both. (p. 4)

Liz’s introductory words marked a turning point for the evaluation. In our evaluation team conversations about her book and about the evaluation’s findings, we began to appreciate the multiple interpretations of the entire performance piece, including the tea. The audience members’ shared experiences were emotional and evocative. They reported being *touched*, *inspired*, *awed*, *engaged*, and *puzzled*. Not everyone, however, felt the same way. Audience members noticed different performance themes (e.g., the Big Bang, Heisenberg Uncertainty Principle, ethics and science, discovery, origins), but not everyone observed the same ideas.

This plurality of perspectives came through in the surveys and the tea table conversations. If there was one consistent finding of the evaluation, it was that there was not one single, shared interpretation of *The Matter of Origins*. Liz Lerman and Dance Exchange artists had layered music, video, voiceovers, still images, and movements in a rich, ever-changing montage that was beautiful, inspired, and provoking. In the end, we came to understand the point of the dance: It was for audience members to consider, re-consider, and re-arrange their feelings and thoughts about spiritual and scientific explanations of origins and the universe. The reactions that *The Matter of Origins* was intended to evoke were intentionally complex.

Turning to Developmental Evaluation

When we recognized the complexity of interpretations, our thinking shifted a second time. We started to draw upon an entirely different set of ideas about evaluation called *developmental evaluation* (Morrell, 2010; Patton, 2010). Developmental evaluation characterizes situations as simple, complicated, or complex and advocates for different evaluation approaches depending on how the situation is characterized. Developmental evaluation is particularly well-suited for complex situations, where multiple interrelationships prohibit straightforward interventions from being successful. Patton (2010) says,

Evaluation has explored merit and worth, processes and outcomes, formative and summative evaluation; we have a good sense of the lay of the land. The great unexplored frontier is evaluation under conditions of complexity. Developmental evaluation explores that frontier. (p. 1)

Mischaracterizing the situation as simple.

When we started this collaborative evaluation with Liz Lerman and Dance Exchange artists, we perceived the situation to be a simple one. Liz Lerman had made a dance about physics. Our role as evaluators was to determine the physics ideas the audience members took away from the experience. This evaluation perspective assumed that there was a high degree of certainty, predictability, and agreement about what was being evaluated (Patton, 2010; Snowden & Boone, 2007; Westley, Zimmerman, & Patton, 2006). Simple situations, in other words, are characterized by “linear, direct connections

between cause and effect, easily observable, understandable, and verifiable” (Snowden & Boone, 2007, p. 69). Our early request for a script mapping dance sequences to particular science ideas was an example of this instrumental view. Our request demonstrated that we assumed there was a high degree of agreement on what the dance sequences meant. Our assumption was influenced by NSF’s *Framework for Evaluating Impacts of Informal Science Education Projects* (Friedman, 2008), which emphasizes such clearly defined, linear approaches to program design and evaluation. In retrospect, we discovered that our instrumental approach was naïve, especially since *The Matter of Origins* was an art and science dance performance exploring scientific and spiritual questions about origins and the universe.

Mischaracterizing the situation as complicated.

After the Tea Intensive workshop and after analysis of University of Maryland, College Park data, our perspective on *The Matter of Origins* and subsequently our role as evaluators shifted. We started to view the situation as a complicated one. Because Liz Lerman created this art and science dance to evoke a range of reactions from audience members, our role as evaluators was to document and name those multiple interpretations. This evaluation perspective assumed that what was to be discovered was challenging and difficult, but knowable (Patton, 2010; Snowden & Boone, 2007; Westley, Zimmerman, & Patton, 2006). In complicated situations, “cause and effect can be determined but require analysis and expert investigation, as some things are known but others are not” (Snowden & Boone, 2007, p. 70). Open-ended questions would reveal these multifaceted, yet measurable, interpretations. Based on data from the University of Maryland, College Park performances, we planned to develop measures that would reveal a range of interpretations and experiences. Upon critical reflection, this shift was a step in the right direction but still assumed that we would create an evaluation design, instruments, and questions that we could use at the remaining performance sites. This approach failed to accommodate the forces of change influencing audience members, Liz Lerman, Dance Exchange artists, and even us evaluators.

Recognizing the situation as complex.

After the performance at Wesleyan University, we began to view the situation as a complex one. Liz Lerman’s choreography was not finalized—she continued to refine the piece, modifying

the dance by expanding some sequences, dropping others, and changing voiceovers and images. These ongoing refinements required us to constantly learn the nuances of the latest iteration so that the evaluation instruments aligned with the performance. External events also influenced the performance and the evaluation. In 2011, a tsunami hit Japan and caused a nuclear disaster. This event, covered heavily in the news, forced all of us to reconsider what audience members' reactions would be to two themes of the performance: the ethical issues associated with the discovery of radium and the genesis of nuclear energy. Liz Lerman and Dance Exchange artists modified the tea table discussion guides and added new content about nuclear proliferation to the iPads. We realized that we were part of a complex situation, filled with uncertainty caused by constant change internally and externally (Patton, 2010; Snowden & Boone, 2007; Westley, Zimmerman, & Patton, 2006). Complex situations acknowledge that "cause and effect is contingent on contextual and dynamic conditions, and therefore unknowable, with patterns being unpredictable in advance" (Snowden & Boone, 2007, p. 72). From a developmental evaluation perspective, it is the evaluator's role to foster dialogue, creativity, and innovation; to watch for and interpret emerging patterns; to remain flexible and adaptive; and to engage in reflective practice to capture, understand, and interpret what is emerging as it emerges (Patton, 2010). We eventually adopted a developmental approach to the evaluation, recognizing that each performance site had its own dynamics and requirements, dependent on the physical characteristics of the performance spaces, the latest refinements in the dance, audience members' recent experiences, and our deepening understanding of the audience members' experiences based on collected data. We learned to create evaluation designs, instruments, and questions to accommodate the complexity of the environments.

Our cycles of activity, reflection, and redesign required us to be vigilant about listening to our community partners, noticing new patterns in the data, and adapting our evaluation to our new understandings of the situation. This constant co-evolution between the performance and the evaluation design, especially in spring 2011, when there were multiple performances at three different performance sites in 3 months, resulted in a second evaluation intensive. This time our intense evaluation conversations were based on our own experiences at the performances and on the analysis of audience member data from the earlier performance sites. As our collaborative evaluation concluded, we started to view our experience with Liz Lerman and Dance Exchange artists much like the

experiences of other community-engaged scholars working at the engagement interface—“complex, interactive, iterative, emotional . . . border crossing” (*Fear et al.*, 2006, p. 13).

Crossing Multiple Borders at the Engagement Interface

Our collaboration with Liz Lerman and Dance Exchange artists crossed several borders, including community and university, art and science, and creative performance and scientific evaluation. We spanned the ways of knowing from these different traditions and negotiated our way through the discourses, structures, norms, and roles that define what counts and why in these different systems of meaning (*McMillan*, 2009). Our work at the engagement interface was possible because we collaborated closely with our community partners to create new approaches to evaluation; to develop shared norms based on mutual respect, trust, and honesty; to honor the unique perspectives, skills, and practices of each member of the collaboration; and to engage in ongoing, honest, and shared appraisal of outcomes (*Fear et al.*, 2001).

Instead of being stymied by the complexity of our border-crossing evaluation, we were able to “learn our way into” designing an evaluation that was rigorous but not disruptive for audience members. Through this experience at the engagement interface, we deepened our understanding and practice of community-engaged scholarship as evolving and iterative, one where the dynamic interplay of internal and external forces of change leads to emergence (*Doberneck*, 2003; *Holman*, 2009).

Concluding Reflections

As we critically examined our experience with Liz Lerman and Dance Exchange artists, we recognized significant transitions in our understanding about the nature of our collaboration. We moved from an instrumental to an interpretive to a developmental perspective. Where we once sought a tidy script mapping science ideas to dance sequences, we now embraced a constantly changing, dynamic performance with corresponding evaluation designs, instruments, and questions specific to each performance site. We realized that the strength of taking a developmental approach to evaluation was recognizing that the dance itself and the audience members’ reactions to it were complex, requiring us to anticipate differences in advance and to stay open to surprises throughout the process (*Morrell*, 2010).

Developmental evaluation was the appropriate approach to this collaborative evaluation, because it honored the nature of *The Matter of Origins*, both in its creation and in its content. A major theme of the performance was the Heisenberg Uncertainty Principle, which reveals the imprecise nature and the limitations of measurement (Heisenberg, 1927). During Act Two, the physicist hosts explained the Heisenberg Uncertainty Principle, and tea table provocateurs convened dialogues about uncertainty and measurement. Some argue that this uncertainty principle requires researchers who study human interactions, including learning, to take a less positivist approach to research and evaluation and to acknowledge that “understanding is no longer linear and simplistic, but pluralistic and multifaceted” (Roth, 1993, p. 676). Our experience reinforced these ideas.

Suggested Reflective Questions for Further Consideration

We realized that the transitions in our thinking resulted from intense periods of dialogue, listening, reflection, creativity—on our own, within our evaluation team, and with our community partners. Our commitment to reflexivity meant that we cultivated our knowing-in-action as a valuable source of sense-making and understanding. We offer the following suggestions and reflective questions for readers to consider in the context of their own community engagement activities:

Use ethnographic approaches to understand your community partners and their goals. Ethnographic approaches to collaboration (e.g., gaining trust, developing rapport, prolonged engagement, using dialogue and key informants) are particularly helpful practices early in the partnership. **Consider:** *How might ethnographic approaches to collaboration strengthen your relationship with your community partners? How might you come to know their context intimately? How might you reveal the details of your context to your partners as well?*

Develop shared systems of meaning among community partners, university partners, and funding agencies. Successful community-engaged scholars acknowledge that each partner has different, sometimes competing, ideas of what counts and why. Savvy collaborators recognize these different systems of meaning and understand how to span the boundaries of their collaborative work. **Consider:** *What are the systems of meaning that frame your way of knowing? Your community partner’s way*

of knowing? Your funding agency's way of knowing? How might you come to better understand one another? How might you creatively find a way for your engaged scholarship to recognize and bridge these differences?

Recognize that different situations require different strategies. Determine whether your situation is simple, complicated, or complex, and then develop your community engagement activities to match the situation. Forces often influence the community or university partner to view the situation as a simple one and to implement evaluation designs that fail to accommodate the uncertainty and dynamism inherent in the context. **Consider:** *Is your situation a simple, complicated, or complex one? What approaches are appropriate to the situation? If it is a complex situation, how might you accommodate and embrace uncertainty in your work?*

Reflect critically to learn your way into better scholarship and practice. Cycles of action and reflection are essential for deepening understanding based on your lived experiences. **Consider:** *In what ways do you pause, step back from your collaboration, and reflect upon what you are knowing-in-action? How are you practicing reflexivity—on your own and together with your community partner? What are you learning from these critical reflections?*

Seek new ways of understanding your engagement experience. Community-engaged scholarship, especially in complex situations, has elements that come into focus after the project has already started. Conceptual frameworks and theories that were useful initially may not be suitable after some real experience. Discovering new ways of thinking about your community engagement activities, even as the collaboration is under way, is vital to your success. **Consider:** *What new ideas or constructs might be useful to you as you lift up and frame your community engagement experiences? How might you draw upon concepts, theories, or frameworks to make sense of patterns that you are now aware of?*

We hope that our autoethnographic essay describes our deepening understanding of our experience at the engagement interface, and that our reflections inform others who embark on similar journeys through the unpredictable and transformative territory of community-engaged scholarship.

Endnote

1. While this essay's main focus is on the process of collaborating with our community partners, we understand it is important to mention the evaluation findings, as they are a testament to Liz Lerman's vision, the Dance Exchange's performances, and our relationship with them on this collaborative evaluation. Across five performance sites, we surveyed over 4,000 audience members, who showed changes in attitude, interest, knowledge, and behavior toward science in the expected direction at the $p < .05$ level of significance. At the end of Act Two, audience members also reported statistically significant increases in the emotions *engaged*, *amused*, *comfortable*, and *curious* at the $p < .001$ level.

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We are grateful to community partners Liz Lerman and the Dance Exchange artists. They helped us understand that dance is a way of asking questions, movement is a way of knowing, and performance is a way of examining the important issues of our time. Ellen Chenowith and John Borstel provided feedback on this essay so that our community partner's perspective was represented in the writing. The over 4,000 audience

members, who voluntarily completed surveys at *The Matter of Origins* performances, deserve our gratitude as well. Finally, we would like to acknowledge funding from the National Science Foundation Informal Science Education EARly-concept Grants for Exploratory Research (EAGER) for the implementation of Act Two and the evaluation, which made our participation in this collaborative evaluation possible.

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ENGAGEMENT SCHOLARSHIP CONSORTIUM
2011 POSTER AWARDS

Engagement Scholarship Consortium Poster Awards

Burton A. Bargerstock

Overview of the Poster Awards

The National Outreach Scholarship Conference has long provided a venue for the presentation of posters representing innovative research, effective practices, and impactful programs. In 2011, conference planners developed a series of measures focused on enriching the poster session as a platform for showcasing community-based scholarship and university outreach. A number of the changes were implemented to enhance the experience of the poster sessions for presenters and attendees of the conference. These changes included:

- organizing two distinct poster sessions, each with a different line-up of posters;
- convening each poster session for a full 2 hours, the longest presentation format offered at the conference;
- clustering posters on similar topics near each other to create more natural spaces for thinking and discussion across common themes; and
- offering a reception with light food and drinks at each poster session to create a comfortable atmosphere for conversation.

Another change was implemented to acknowledge the important contribution excellent posters make to a conference program. The Engagement Scholarship Consortium inaugurated a special recognition program for scholarly work presented as a poster. A panel of judges reviewed over 100 posters presented during the meeting in East Lansing, Michigan, from an impressive group of national and international submissions. The posters were rated on the basis of their contribution to the conference theme and for their textual content and visual and graphic quality. On the final day of the event, the Engagement Scholarship Consortium announced the five most outstanding posters of its 2011 National Outreach Scholarship Conference. The 2011 Outstanding Poster Award recipients include:

- ***Exploring Competencies for Manufacturing Education Partnership (MEP) Centers***
Diane D. Chapman and Kate G. Guerdat
North Carolina State University
- ***Mapping a Strategic Plan for Health: Community-Based Participatory Research with Underserved, Low-income, Urban Neighborhoods***
Gail Zandee
Calvin College
- ***Measuring Academic Capacity: Research in Relationship***
Fay Fletcher, Davina D. Rousell, Stephanie Worrell,
Barb McLean, and Lola Baydala
University of Alberta
- ***Student and Community Partner Expectations for Effective Community-Engaged Learning Partnerships***
Holly Stack-Cutler and Sara Dorow
University of Alberta
- ***Instructor-Led Engagement and Immersion Programs: Transformative Experiences for Study Abroad***
Natalie Graham and Pat Crawford
Michigan State University

Each group of poster presenters received a certificate of their accomplishment and was invited to publish an abstract of their work in this special issue of the *Journal of Higher Education Outreach and Engagement*. The pages that follow contain abstracts of the five award-winning posters, along with reproductions of each poster and links to download them from the Engagement Scholarship Consortium website.

Exploring Competencies for Manufacturing Education Partnership Centers

Diane D. Chapman and Kate G. Guerdat

To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/ChapmanGuerdat.pdf>

The National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership works with U.S. manufacturers to help them create and retain jobs, increase profits, and save time and money. Members of the Manufacturing Extension Partnership recognized the need to expand capacity and capabilities of their network to address the mounting challenges facing manufacturers. To this end, the organization adopted a new strategic vision in which Manufacturing Extension Partnership field consultants develop long-term relationships with client manufacturers while providing performance solutions focused on five areas: continuous improvement, technology acceleration, supply chain, sustainability, and the workforce.

A project was funded to educate Manufacturing Extension Partnership field consultants to embrace a holistic and integrated approach in their work, and ultimately help implement the new vision. One step in facilitating this change was to identify the gap between existing and desired competencies for Manufacturing Extension Partnership field consultants. To meet this need, a research team was guided by the following questions:

1. What does the literature say are important skills and knowledge for the types of work done by Manufacturing Extension Partnership field consultants?
2. What are the skills and knowledge currently used by Manufacturing Extension Partnership field consultants?
3. What are the skills and knowledge that Manufacturing Extension Partnership field consultants and their center directors believe they need to possess?

An extensive review of educational and management literature was completed. Despite the critical nature of measuring performance in workforce development, there exists a dearth of empirical research on formulated competencies for performance improvement (*Guerra, 2003*). Inconsistencies emerge between perceived need and current practice, suggesting that barriers are preventing

application of required competencies (Robertson, 2004). Development of performance models based on self-assessed competency models will bridge best practices, unique accomplishments, and performance accountability (Robinson & Robinson, 2008).

In addition to the review of literature, informal interviews were conducted with three Manufacturing Extension Partnership center directors in an effort to determine the perceived skills and knowledge needed by center field consultants to implement the Next Generation Strategy. The literature review and director interviews resulted in 119 skill and knowledge items. Upon review, 16 items were found to be duplicated and were therefore removed. The final 103 skill and knowledge items were grouped under nine broad themes: knowledge of the client; knowledge of client industry segments; knowledge and skills in workforce performance consulting; knowledge and skills in performance-based training; knowledge and skills in assessment, data collection, and analysis; knowledge and skills in project management and planning; knowledge and skills in strategic partnering; knowledge and skills in communication; and knowledge and skills in personal mastery.

Planned next steps in this research include a Delphi study with Manufacturing Extension Partnership center directors to further refine the list. Once refined, the list of competencies will become a professional development instrument. The instrument will be sent to all Manufacturing Extension Partnership field consultants in the United States, who will be asked to rate the importance of a skill or knowledge item and their own competency in that item. The results of this competency study will guide the Manufacturing Extension Partnership in professional development activities and will act as a strategic tool to support organizational change.

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Exploring Competencies for Manufacturing Education Partnership (MEP) Centers

Diane D. Chapman and Kate G. Guerdat
North Carolina State University



Project Background

This project is part of a 3-year grant funded by the U.S. Department of Commerce, specifically, the National Institute of Standards and Technology's (NIST) Holdings, Manufacturing Extension Partnership (MEP).

The National Institute of Standards and Technology (NIST) Holdings Manufacturing Extension Partnership (MEP) works and helps small and mid-sized U.S. manufacturers to grow their businesses, create jobs, increase profits, and save time and money. The nationwide network provides a variety of services, from innovation strategies to process improvements to green manufacturing. MEP also works with partners at the state and federal levels on programs that put manufacturers in position to develop new customers, expand into new markets and create new products.

MEP field staff has over 1,400 technical experts... located in every state... serving as business advisors, focused on solving manufacturers' challenges and identifying opportunities for growth. MEP serves an essential role in sustaining and growing America's manufacturing base. The program assists manufacturers to achieving new sales, leading to higher tax receipts and new sustainable jobs in the high-paying advanced manufacturing sector.

Problem Statement

In 2008, MEP leadership laid out a new vision called the Next Generation Strategy aimed to direct activities at U.S. U.S. manufacturers continue to struggle with a changing landscape that includes consistent pressures to cut costs, improve productivity, and get to market faster with new and improved products.

The MEP Next Generation Strategy presents a framework for Centers to help manufacturers address five key critical areas in concert. These areas are continuous improvement, technology acceleration, supplier development, sustainability, and workforce. This presentation is based on research in process to help MEP center staff move toward a more holistic and integrative approach in their work.



The Next Generation Strategy (NGS)



Over the 20-year history, MEP helped thousands of companies renew themselves through process improvement and business growth initiatives leading to more sales, new markets, and the adoption of technology to deliver new products and services.

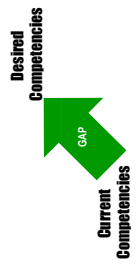
But, manufacturers in the United States are facing significant challenges. There is a consistent pressure to cut costs, improve productivity, and get to market faster with new and improved products, all in a larger, more competitive, global playing field.

NIST/MEP realizes the need expand the capacity and capabilities of the MEP nationwide network to address the challenges facing manufacturers. As a result, it has adopted a new strategic vision for its Centers.

The new vision requires that MEP Consultants work with partners throughout the network to provide the tools, services and connections focused on the five key areas of the framework: continuous improvement, technology acceleration, supply chain, sustainability, and workforce.

MEP Consultant Competencies

One foundation to facilitation of this change is to understand the current and desired competencies of MEP center staff. The gap between these two sets of competencies is then considered the area of professional development focus.



Research Questions

In order to complete uncover the gap between existing and desired competencies for MEP field consultants, the research team is guided by the following questions:

1. What does the literature say are important skills and knowledge for the types of work done by MEP field consultants?
2. What are the skills and knowledge currently used by MEP field consultants?
3. What are the skills and knowledge that MEP field consultants believe they need to possess?
4. What are the skills and knowledge that NIST/MEP leadership (both national and local) believe that NIST/MEP field consultants need to possess?

"Professional and highly skilled MEP consultants are needed to address the challenges of manufacturing industry and to support the growth of manufacturing." - National Institute of Standards and Technology

"The field of MEP consultants is a performance oriented, data driven, and continuous learning environment." - National Institute of Standards and Technology

Literature Review

Despite the critical nature of measuring performance in our field in industry, dearth of empirical research on formulated models for performance improvement (Dolan, 1999; Guerra, 2003)

Inconsistent emerges between perceived need and current practice - suggesting there are obstacles preventing application of required competencies (Guerra-Lopez, 2003)

Development of performance models based on self-assessed competency models will bridge best practices, unique accomplishments, and performance accountability. (Robins & Robinson, 2008)

MEP Center Director Interviews

MEP Field Consultant Competency Survey



Skills and Knowledge for Successful Performance Consulting
Data information on self-assessed knowledge levels in a consultant business performance assessment. Your position in business has been ranked from 1 (low) to 10 (highest) in order to give you an idea of how you compare to other consultants. The higher the number, the better your performance. Your position in the survey is shown in the top right corner. The number of respondents who ranked you in that position is shown in the bottom right corner. The number of respondents who ranked you in that position is shown in the bottom right corner.

Performance Consulting Knowledge
Performance consulting for small business knowledge.
1. Rating on a field of knowledge item that field consultant is being assessed.
2. Field consultant's rating on a field of knowledge item.
3. Field consultant's rating on a field of knowledge item.
4. Field consultant's rating on a field of knowledge item.

Knowledge of the Client
Knowledge of the client's organization and its industry to support a business performance assessment. This includes knowledge of the client's organization and its industry to support a business performance assessment. This includes knowledge of the client's organization and its industry to support a business performance assessment.

Knowledge of the Client's Organization
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To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/ChapmanGuerdat.pdf>

Mapping a Strategic Plan for Health: Community-Based Participatory Research with Underserved, Low-Income, Urban Neighborhoods

Gail Zandee

To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/Zandee.pdf>

Since 2002, community-based participatory research methods have been used by the Calvin College Nursing Department to map out a strategic health plan for three urban, low-income, underserved neighborhoods. Community-based participatory research is a collaborative approach to inquiry, in which community and academia are co-teachers and co-learners (Anderson, Calvillo, & Fongwa, 2007; Heffner, Zandee, & Schwander, 2003). It emphasizes shared power, building community capacity, and joint research with the goal of action, to improve the health of the community (Minkler & Wallerstein, 2003). Nine focus groups and 449 door-to-door health surveys were completed across the three urban neighborhoods between 2002 and 2004.

Neighborhood meetings were held to share the results of the research, and to give residents a platform to identify the top five health concerns for their neighborhood along with recommended solutions. Neighborhood strategic plans were then collaboratively written documenting the baseline research, and linking the resident-driven health concerns and solutions with nursing student learning experiences across the nursing curriculum. The top health concern identified by all three neighborhoods was lack of access to health care. The resident-driven solution addressing this issue was development of a Community Health Worker Program. Residents would be trained in basic health care and would work with nursing students to promote health and access to care in the neighborhood. The Community Health Worker Program was identified on the strategic plan as a strategy to promote access to care, and was initiated in the three neighborhoods in 2005. Evaluation measures were outlined in the strategic plan to measure effectiveness of the collaborative program.

Between 2009 and 2011, students and Community Health Worker Program members collaborated to complete the same research process of focus groups and door-to-door surveys as

initiated in 2002. Neighborhood meetings were conducted to disseminate the research results, review the top five health concerns, recommend solutions, and update the strategic plan. Results showed that emergency room use and barriers to health care decreased in the three neighborhoods between 2004 and 2011; access to dental care increased. Combining community-based participatory research with written strategic plans was found to be a useful strategy to unite community members, nursing students and faculty members, and neighborhood organizations in a long-term partnership addressing resident-driven health concerns and solutions in urban underserved neighborhoods while educating nursing students.

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Gail Zandee is the community partnership coordinator and assistant professor of nursing at Calvin College. Her research interests include health promotion, health disparities, social determinants of health, access to health care, and community health workers. Zandee earned her BSN from Calvin College and her MSN from Wayne State University.

Mapping a Strategic Plan for Health: Community-Based Participatory Research with Underserved, Low-Income, Urban Neighborhoods

Gail Landheer Zandee MSN, RN Assistant Professor of Nursing, Calvin College



Introduction

In 2002, the Calvin College Nursing Department initiated a community-based nursing curriculum. They sought to spread community experiences across the curriculum and have those experiences be driven by the health needs of the community.

Background

- Community-Based Participatory Research (CBPR): a collaborative approach to inquiry where students and academics are co-teachers and learners [1,2]
- Empowers shared power, building community capacity, and joint research with the goal of action, improving the health of the community
- Empowers the community to identify health concerns and solutions
- Connects resident voice to nursing student curriculum
- Practicum experiences in community-based neighborhoods in 2002
- Between 2002-2004, qualitative and quantitative data gathered through focus groups and door to door surveys to assess neighborhood strengths and health concerns.
- Neighborhood meetings to report data and have residents identify top 5 health concerns & solutions
- Strategic plan documents top health concerns and solutions and links with nursing student activities
- One example of a neighborhood driven solution to address lack of access to care was developing a Community Health Worker (CHW) Program where residents are trained in basic health care and work with students promoting health and access to care in the neighborhood
- Between 2009-2011, students and CHWs collaborate on repeating same research process as in 2002-2004
- Update strategic plan

Funding for CBPR and CHW program received from Calvin College, Spectrum Health Healthier Communities Department and a HUD Community Partnership Outreach Grant

Focus Groups

Focus groups conducted by the Calvin College Nursing Program between 2002-2004 and repeated in 2009-2011

- Encourage residents to share views about neighborhood strengths, day to day concerns and health care
- Three focus groups conducted per neighborhood (results from 2010 focus group in Baxter/Madison neighborhood below)

Neighborhood Strengths

- Good neighbors who take care of and watch out for each other
"We all kinda link to each other and look out for each other..."
- Community and Neighborhood Resources
"Like the Baxter Community Center cause I've been there more times I was 15."
- The Churches
"I think there are 7 churches in the Baxter area."

Barriers to Health Care

- Limited or no medical/dental insurance
"These are all out of Medicaid and there's no coverage, they don't have any coverage."
- High cost of health care
- Transportation
"Lack of knowledge of resources or when to seek help"
"People don't know where to go..."
- Long wait for an appointment or insurance
"It's a long time you have to wait...and that's crazy to me!"

Top Health Concerns

- High Blood Pressure
- Diabetes
"Every woman is on some...depression medication..."
- Asthma
- Alcohol / Drugs
"A community of people with no outlet, no help..."
- Obesity
- Sexually Transmitted Diseases

Neighborhood Survey

Door to door health surveys conducted by the Calvin College Nursing Program between 2002-2004 and repeated in 2009-2011.

- Encourage residents to share ideas about their health and the health care system
- Systematic random sampling used to conduct health survey in each neighborhood.
- Survey in 2009-2011 conducted in partnership with Community Health Workers (CHWs)
- Between 128-191 surveys completed per neighborhood

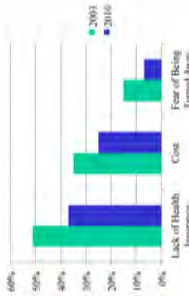


Strategic Plan

- Based on focus group and survey results, neighborhood residents identify top health concerns and solutions
- Strategic plan identifies neighborhood strengths, top health concerns, strategies to address concerns, and evaluation measures
- Top 5 Health Concerns of Baxter / Madison
 - Lack of Access to Health Care
 - High Blood Pressure
 - Unintended Pregnancies and STI's
 - Depression / Anxiety
 - Obesity
- Resident Driven Solutions
 - Community Health Worker Program
 - Knowing Your Body Kit
 - Depressant / Anxiety Support Groups

Evaluation Baxter / Madison Neighborhood

Barriers to Health Care



Frequency of ER Visits



Access to Dental Care



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To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/Zandee.pdf>

Measuring Academic Capacity: Research in Relationship

Fay Fletcher, Davina D. Rousell Stephanie Worrell,
Barb McLean, and Lola Baydala

To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/FletcherEtAl.pdf>

Successful, sustainable initiatives in communities are community-based, community-paced, and community-led. In addition, the unique culture of each community is a protective factor, contributing to that community's physical, mental, spiritual, and emotional health. Academic researchers working with six First Nations and one Métis Settlement asked, "What is our role as academic partners in building capacity for community-based participatory research?" The goal was to understand changes in the researchers' capacities and their roles in building the capacity of community members.

The Public Health Agency of Canada's Community Capacity Building Tool (*Public Health Agency of Canada, 2007*) served as the framework for two focus groups. A thematic analysis of the focus group transcripts resulted in insights into researcher capacity and potential contributions to community capacity building. Focus group participants validated the interpretations and four themes that emerged from the data.

Theme 1. Language and measures. The language and tools for measuring capacity, as described in existing literature, define and explore capacity from a Western worldview. In consultation with community, the authors learned that measures of capacity building based on an Indigenous worldview can include cultural identity, life purpose, community engagement, transmission of traditional knowledge from elders to youth, and participation in cultural ceremonies. In response to time-sensitive pressures to measure and document capacity, researchers often overlook the importance of co-creating relevant and meaningful measures. It is in the act of co-creation, where worldviews overlap, that researchers and community members contribute to each other's capacity for research, sustainability, and, ultimately, community health.

Theme 2. Community development. In 2011, Health Canada presented a community development continuum for First Nations and Métis people (*Scones, 2011*). This continuum portrays community development through four phases: paralysis, coping,

rebuilding, and collaborating. Communities in paralysis are characterized by ineffective or unavailable programs and services, lack of collaboration, financial management issues, little community consensus, risk of substance abuse and suicide, and small clusters of individuals healing from the intergenerational impacts of colonization. In contrast, collaborative communities are reflected in innovative programming, access to resources, excellent management, cross-sector collaboration, support to and mentorship of other communities, and stable public health services. These aspects highlight the importance of capacity building within the context of community development. Awareness of the stages of community development ensures that project goals and timelines are realistic and align with existing community capacity.

Theme 3. Balancing capacity building. In the desire to build *community* capacity, researchers often overlook the importance of building the capacity of *academic* team members. Researchers are also vulnerable to experiencing paralysis when overwhelmed with ongoing challenges. Individual and team resilience depends on building both academic and community capacity.

Theme 4. Capacity building: A positive, non-linear trajectory. Capacity building is a cyclical process that evolves through the establishment of long-term relationships. Each phase of the project may require building new relationships and continual re-establishment of trust between community and academic partners. Humility, integrity, introspection, and a respect for the unique perspectives of different worldviews are important ingredients of bi-directional capacity building. When faced with challenges and transitions, strengths and learned capacities determine the ability to respond in positive and creative ways.

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Measuring Academic Capacity: Research in Relationship

Fay Fletcher^a, PhD; Lola Baydala, MD, MSc^b; Stephanie Worrell^c, MEd; Barb McLean^c, MA; Davina Rousell^c, MA
 a. Associate Professor, Faculty of Extension, University of Alberta; b. Associate Professor, Department of Medicine and Dentistry, University of Alberta; c. Department of Pediatrics, Faculty of Medicine and Dentistry, University of Alberta

Premise
 Successful, sustainable initiatives in communities are community-centred, community-led. Culture is perhaps the most important protective factor in community.

Research Question
 What are the key themes, barriers in building capacity for community based participatory research (CBPR)?

Goal
 To understand and build our capacity to contribute to community based participatory research with First Nations and Métis people.

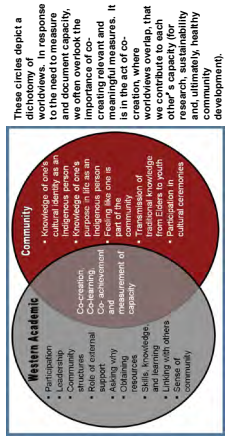
Objectives
 • To explore changes in our own capacity
 • To explore our role in community capacity building

Methodology
 Academic researchers working with six First Nations and one Métis Settlement gathered on two occasions to reflect on their own capacity and their contributions to community capacity.

The Public Health Agency of Canada developed the Community Capacity Building Tool (CCBT): a planning tool to help build community capacity in health promotion projects. The tool consists of 9 features: considered indicative of community capacity: Community, Leadership, Co-learning, Role of external support, Role of external support, Asking why, Obtaining resource, Skills, Knowledge, and Learning. Working with others, and Sense of community. This tool provided the framework for focus group discussions.

Analysis
 As a focus group participant, the lived experience and thematic analysis of the potential contributions to community capacity building in a number of areas. The interpretation and presentation of four key themes were validated through discussions with focus group participants.

Theme 1: Language and Measures
 Existing literature and tools for measuring capacity (ie: CCBT) continue to define and explore capacity from a Western worldview, making it difficult to co-create concepts and measures of individual and community capacity.



Theme 2: Aligning Capacity and Community Development

In 2011, Health Canada presented a community development model that provided a framework for community capacity in community based participatory research.

Communities in particular, for example, are reflected by ineffective or unavailable program/services, lack of collaboration, financial management issues, lack of community consensus, risk of substance abuse and suicidality, and poor culture of individual health.

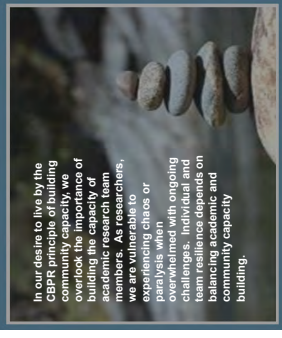


In contrast, as communities progress through the community development continuum, community capacity is reflected in management, cross-sector collaboration, support to and availability of other communities, potential national leaders, and stability in public health services.

These scenarios highlight the importance of considering community capacity in the development of community development in capacity building in light of community development. Knowing the stage of community development, we are more likely to anticipate and address community capacity needs, and set realistic goals and timelines.

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Theme 3: Balancing Capacity Building



In our desire to live by the CBPR principle of building community capacity, we often overlook the capacity of academic research team members. As researchers, we are vulnerable to experiencing chaos or overwhelmed with ongoing challenges. Individual and team resilience depends on balancing academic and community capacity building.

Theme 4: Capacity Building: a Positive, but not Linear Trajectory

Capacity building is a very cyclical process and, if you stay involved with community, the building of the relationships and phase of the project are powerful determinants of capacity. When faced with challenges and setbacks, we often experience decreased capacity. Fortunately, our learning path follows a positive trajectory with "ups" and "downs".



To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/FletcherEtAl.pdf>

Student and Community Partner Expectations for Effective Community-Engaged Learning Partnerships

Holly Stack-Cutler and Sara Dorow

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Student insight and community partner feedback can contribute to understanding and thus improve community-engaged learning practices. Student and community partner voices, however, are not often heard during community-engaged learning development. To ascertain student and community partner expectations for community-engaged learning, thematic analysis was performed on data from two sources: a workshop where five student panelists involved in community-engaged learning discussed their expectations of community-engaged learning, and a survey of community partners ($n = 45$) to examine perspectives on working with students and university partners during community-engaged learning placements.

Student Findings

From their community placements, students expected opportunities to acquire management skills, to exercise leadership skills, and to be given responsibility. They further expected to be exposed to a variety of perspectives on how others view their expertise, and to have an involved community supervisor who would give an orientation of the organization, provide ongoing supervision, and highlight the significance of the work students would perform in their community-engaged learning placement. Students considered their placement to be a safe environment where they could challenge themselves, test learned skills in a professional setting, and connect faces and stories to theories learned in the classroom. To successfully negotiate community and university expectations, students recommended taking ownership of placement experiences and being responsible for one's own work; having ongoing conversations to ensure that one's own and community partners' expectations are being met; learning theory in the classroom and engaging in practicum preparation; using problem-solving skills to navigate unexpected situations; and exploring future opportunities to hone skills.

Community Partner Findings

Community partners appreciated having flexible timeframes and being able to negotiate length of community-engaged learning placements with university partners based on their organization's needs. Traits that they attributed to effective community-engaged learning placements and partnerships were grouped into three areas: placement characteristics, student characteristics, and university partner characteristics. Effective community-engaged learning placements had specific outcomes, were mutually beneficial for organization and university partners, did not require financial support from the organization, and had good community mentors available for students. Effective community-engaged learning students were knowledgeable about and responsible for meeting placement expectations; came to the placement with adequate background, skills, and pre-training; were enthusiastic, motivated, and ready to learn; and had an interest in the organization and their placement tasks. Effective university partners conducted ongoing student supervision during placements, supported students to help them get the most out of their experiences, and shared students' progress with community partners through reports.

Conclusion

To foster effective community-engaged learning partnerships, universities need structures for students to (1) share past community-engaged learning experiences with other students and prepare for community-engaged learning placements; (2) have mutually beneficial conversations with community partners; (3) negotiate with university partners; and (4) receive mentoring and support from university and community partners. Further, universities need to establish structures that enable ongoing conversations between community partners and university partners. University and community partners need to provide feedback, share what they have learned about making student engagement work, and negotiate community-engaged learning placement timelines.

About the Authors

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STUDENT AND COMMUNITY PARTNER EXPECTATIONS FOR EFFECTIVE COMMUNITY-ENGAGED LEARNING PARTNERSHIPS

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INTRODUCTION

Encouraging student insight and community partner feedback into their community-engaged learning (CEL) experiences can lead to understanding promising learning practices. However, students' and community partners' views are not often heard during CEL development.

RESEARCH DATA & METHODS

We conducted a thematic analysis on two types of data:

- 5 students from Business, Law, Biological Sciences, Arts, and Human Ecology) with experience in co-op, practicum, and service-learning placements discussed CEL expectations and experiences negotiating community and university CEL expectations
- Community Partner on CEL Practitioner - written responses to open-ended survey question

- 4 from the same program with experience in community development, recreation, social services, and health care fields
- Two discussed characteristics of effective student placements from the perspective of their organizations

FINDINGS

I. Student Perspectives on CEL - Placement Expectations

A Site Environment to Learn Skills and Challenge Themselves

- Students expected to acquire management skills, exercise leadership skills, and take given responsibility
- Students considered their placement to be a safe environment where they could take risks, challenge themselves, and try new things.

"I think that the biggest expectations were that I would have some responsibility and some opportunity to learn new things. I think that the biggest expectations were that you would be responsible for your own actions that you will be rewarded for your qualifications that you bring to it and that you'll be given ample opportunities to really get your feet wet."

Opportunity to Put Classroom Learning into Practice

- Students expected their placement to be a place where they could test learned skills, and abilities in a professional setting.
- Experiences in the real world meant students could attach faces and stories to theories learned in the classroom to more fully develop their understanding of a topic.

Exposure to Multiple Perspectives

- Students expected to get a variety of perspectives on how others view their expertise and areas of interest.
- Students recommended being open to new experiences and learning from mentors and the people one will meet in a community placement.

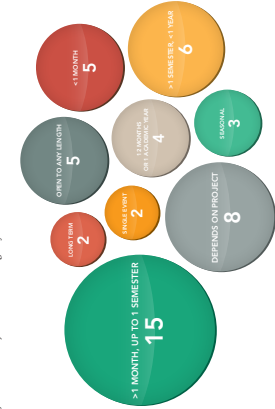
An Involved Community Supervisor

- Students expected their placement supervisor to provide an orientation of the organization and the tasks expected of them, provide on-going supervision, and highlight the significance of their work/duties.
- "For my supervisor I expected maybe to have a little bit of direction, a little bit of structure, maybe an orientation to the organization that would be really helpful, and maybe to explain the meaning behind the work that we would be doing with our clients. To know the purpose of my work better than just being relegated to a task and being left by myself."*

II. Community Partner Perspectives on CEL Partnerships

Community partners appreciated being able to negotiate the length of CEL placements based on their organization's needs (see Figure 1). Key characteristics of CEL partnerships were grouped into three areas: placement, student, and university partner (see Figure 2).

Figure 1. Community Partners' Ideal Length of CEL Placements



DISCUSSION & RECOMMENDATIONS

Students expect their CEL placements to provide them with opportunities to "marry" theory and practice (Hall & Hollander, 2006; Ralph et al., 2008), develop test new skills, and build relationships with community partners and university staff (Sauly & Holland, 2006).

- Through CEL partnerships community partners expect to mentor motivated students, have ongoing communication with students, and provide them with mutually beneficial outcomes with both students and university partners (Coore & Payne, 2002).
- Universities need to have structures for students to (a) share past CEL experiences with other students and negotiate for CEL placements, (b) have mutually beneficial conversations with community partners (and prepare for university partners and (d) receive mentoring and support from university and community partners.
- Universities need to have structures for community partners to (a) have ongoing conversations with university partners and provide feedback, (b) share what they have learned about making student engagement work and (c) negotiate CEL placement time lines.

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CHARACTERISTICS OF EFFECTIVE CEL PARTNERSHIPS:

<p>Effective CEL Placements...</p> <ul style="list-style-type: none"> are focused and have specific outcomes are mutually beneficial for organization and university partner do not require financial support from organizations are mutually beneficial for the interests of students "We had a great time, but we need to start to have a great partner from the board and a specific focus with the student and in consultation with the agency regarding the student project." 	<p>Effective CEL Students...</p> <ul style="list-style-type: none"> are knowledgeable about and responsible for meeting support in their placement are enthusiastic, motivated, and ready to learn "I'm an effective placement, the student would be able to use their education and skill to the greatest benefit to the organization and their studies." "In my field of study."
<p>Effective University Partners...</p> <ul style="list-style-type: none"> conduct ongoing supervision of students during placement support students to help them get the most out of their CEL experience communicate progress with community partners through reports "Students that are supported by a pair secondary coordinator and other students in addition to our staff, work better for us." 	

STUDENT SUGGESTIONS FOR NEGOTIATING COMMUNITY AND UNIVERSITY EXPECTATIONS

Actively Prepare and Communicate

- actively ask questions to clarify community partner expectations
- communicate with community partners before starting placement—do not wait until placement begins
- ask to other students in class and mentoring professor before starting placement
- take ownership of placement experiences and be responsible for own work

Critically Engage with Community Experiences

- learn theory in the classroom and engage in practice preparation
- reflect on theory learned in books does not always dictate placement realities
- use problem-solving skills to navigate unexpected situations and challenges

Explore Future Opportunities

- ask questions to explore future employment opportunities to share skills with the community partner receives services from a trained individual
- "I am a big talker and communicate so I was able to just say 'what do you want me to do?' and 'what are you expecting?' so we had a lot of conversations, one and my supervisor, about what she was hoping to get and what I was hoping to get. And we did have some negotiating along the way because things didn't always work out."
- "One of the things that we did have conversations about, we necessarily work on the same time line...real world time lines aren't September to April."

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Poster can be found at NCEL Resources at <http://www.arts.uAlberta.ca/nceel/blog/>



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Instructor-Led Engagement and Immersion Programs: Transformative Experiences of Study Abroad

Natalie Graham and Pat Crawford

To view the poster: <http://www.engagementscholarship.org/Upload/PosterAwards/2011/GrahamCrawford.pdf>

Study abroad is associated with transformative experiences—that is, events that lead to a change in how a person sees the world. In this study the authors sought to ascertain whether there are common themes of transformative experiences and whether these transformations are related to particular types of study abroad programs. Principles guiding the authors' research and interview coding scheme are informed by study abroad and transformative education literature.

Study abroad can be categorized in three types: instructor-led topic/subject focused, engagement activity instructor-led, and immersion through university semester enrollment. The project engaged debates about whether a short-term faculty-led study abroad is as transformative as a full immersion semester at a foreign institution, and whether an international community engagement study abroad experience fosters transformations different from or similar to the other two types.

Interview Survey and Coding

The authors developed a pilot survey instrument and conducted recorded interviews to check internal consistency in delivery and question response. Subsequently, a random number process was used to select from 303 student participants in College of Agriculture and Natural Resources study abroad programs between 2008 and 2010. The 15 interviews, five for each type, averaged 20 minutes each. The open-ended interview questions asked participants to discuss their experience, highlighting significant, transformative, and resonant moments. Pilot interviews were coded by four researchers to verify and clarify codes and check inter-rater reliability. Final interviews were coded by two researchers with agreement on final codes. Interviews were coded for participants' articulation of epistemic learning (respondent articulated shift in understanding where and how learning happens), relational learning (respondent indicated shift in understanding nationality,

group, or self because of their connectedness), personal adaptive learning (respondent indicated shift in image of self as a moral actor with the capacity to respond to challenges), philosophical learning (respondent indicated a shift in definitions of foundational definitions of being), and skills development (respondent articulated skills and attitudes useful for study abroad experience).

Findings

In instructor-led topic/subject focused programs and immersion-university semester enrollment programs, epistemic and philosophical learning transformations are the most cited, whereas in engagement activity instructor-led programs, personal adaptive and epistemic learning transformations are the most cited. All of the study abroad types resulted in recognition of learning as the result of disorientation and a general shift in worldview for the students.

Instructor-led study abroad participants articulated the highest rates of everyday learning, possibly indicating that these programs promote the recognition of this skill. Interestingly, participants in this type also indicated the least frequent recognition of learning outside the curriculum. This may indicate that instructor-led students recognized both the importance of everyday conversation to learning and that this opportunity for learning was built into their study abroad curriculums. These responders' greater attribution of overall learning experience to curriculum is confirmed by their low articulation of learning as reflection, indicating that their learning was encapsulated in curricular experiences.

Engagement study abroad students articulated the most change in their conception and practice of learning. This seems to indicate that students on engagement study abroad articulate a broader awareness of learning styles and techniques. Similarly, engagement study abroad students more frequently articulated responses that framed learning as the result of disorientation. This may indicate a correlation between recognizing disorientation as learning and recognizing multiple pathways to learning.

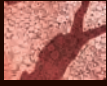
Instructor-led and immersion program students articulated the highest rates of revision in their conceptions of nation and citizenship. Engagement program participants indicated a greater recognition of themselves as individual problem solvers of everyday or challenging problems but had the lowest recognition of national identities. This difference among the types may occur because engagement programs use projects as a core organizing feature. These students may focus more on daily requirements and

tasks, minimizing their awareness of themselves as embodying a particular national identity. This research was conducted through the Bailey Scholars Graduate Fellowship Program.

About the Authors

Natalie Graham is a University Distinguished Fellow at Michigan State University. Her research interests include identity performance and consumption, Black popular music, place-based studies, participatory engagement, and creative writing. Graham earned her bachelor's degree in English with a minor in creative writing from the University of Florida, and she is a Ph.D. candidate in American studies at Michigan State University.

Pat Crawford is the senior director of the Bailey Scholars Program and an associate professor in Landscape Architecture at Michigan State University. Her research interests include community participatory design, design studio pedagogy, study abroad, incidental learning, and student professional development. Crawford earned her bachelor's degree in horticulture from the University of Missouri–Columbia, her master's degree in landscape architecture from Kansas State University, and her Ph.D. in environmental design and planning from Arizona State University.



Transformative Experiences of Study Abroad: Instructor-Led, Engagement and Immersion Programs

Natalie Graham and Pat Crawford
Bailey Scholars Program, Michigan State University

Introduction

Study abroad is famed for fostering transformative experiences for college students.

- Anecdotal information tells us that students feel they have changed during their study abroad.
- Research tells us that study abroad can enhance foreign language skills, understanding of different cultures and has the strongest impact on first time study abroad participants.
- Study abroad can be broadly categorized into 3 types: Instructor-Led Topic/Subject Focused, Engagement Activity Instructor-Led, and Immersion through University Semester Enrollment
- We do not know if there are common themes of transformative experiences and if these transformations are related to particular types of programs.
- There is also debate if a shorter term faculty led study abroad is equally transformative as a full immersion semester long study abroad at a foreign institution.
- Or, if an international community engagement study abroad fosters different, or similar, types of transformations as the other two types.

For this study, transformative experiences are defined as events that lead to a change in how a person sees the world. These events can be a culmination of everyday experiences while studying abroad or a single event which re-frames how a person sees the world.

Method

Three Study Abroad Program Types:
Instructor-Led Topic/Subject Focused
Engagement Activity Instructor-Led
Immersion University Semester Enrollment

Survey Development

Pilot survey instrument tested by 4 researchers with non-CANR study abroad participants. Interviews recorded for checking internal consistency in delivery and question response probes.

Random Sample Participant Selection:

Random number process for selection from 303 student participants in College of Agriculture & Natural Resource study abroad programs, 2008 – 2010

Code Development

The coding scheme is adapted from theories about transformative learning, such as the work of Cranton and Mezirow.

Transcription & Coding

Pilot interviews coded by 4 researchers to verify and clarify codes and check inter-rater reliability.
Final interviews coded by 2 researchers with agreement on final codes.

Coding: Transformative Learning Experiences

1.0 Epistemic Learning

Respondent articulated shift in or deepening understanding of where and how learning happens

- 1.1 Recognizing learning styles and techniques – hands-on, lecture, experiential, stretch
- 1.2 Learning that learning is unplanned – outside of the curriculum
- 1.3 Learning that is a result of “everyday” interaction/conversation
- 1.4 Learning that learning happens as a result of reflection
- 1.5 Learning happens as a result of disorientation, i.e., “getting out of the box”
- 1.6 Learning as a result of seeing one’s ignorance.

2.0 Relational Learning

(adaptation of socio/psychological)

Respondent indicated deepened understanding of an entity or entities because of their relationship with each other

- 2.1 Recognizing the juxtaposition of U.S. as a nation in global context
- 2.2 Learning about self in family, local context
- 2.3 Learning about self in national context
- 2.4 Learning about self in global context
- 2.5 Learning about material realities as a function of social networks

3.0 Personal Adaptive Learning

(adaptation of psychological/moral/ethical)

Respondent indicated shift in impermissibility of self as a moral actor with the capacity to respond to challenges.

- 3.1 Evaluation of self as an individual problem-solver of challenging problems
- 3.2 Evaluation of self as a member of a group that can solve challenging problems
- 3.3 Evaluation of self as having adopted skills directly applicable to “everyday” problems
- 3.4 Evaluation of self as having applied skills to problems since return

4.0 Philosophical Learning

(adaptation of philosophical/aesthetic)

Respondent indicated a shift in definitions of foundational definitions of being.

- 4.1 Articulation of general shift in worldview
- 4.2 Articulation of national identities – how others see US and how we see others
- 4.3 Articulation of specific recognition of socio-cultural categories, i.e. what it means to be a woman, what it means to be African
- 4.4 Articulation of specific recognition of socio-cultural values, i.e. what it means to be smart, good, or beautiful
- 4.5 Articulation of specific recognition of socio-cultural action, i.e. what it means to work, to play, to learn

5.0 Useful Skills and Attitudes

5.1 Recognition of useful attitudes and skills for study abroad experience, in country

5.2 Recognition of useful attitudes and skills for study abroad experience, in U.S.

6.0 When Transformation Occurred

6.1 Aha

6.2 Gradual

6.3 Upon Return

7.0 Prior Study Abroad/International Experience

Semi Structured Interview Protocol

Interviews conducted by 3 graduate researchers and 2 undergraduate researchers. 15 interviews, 5 for each type, average 20 minutes each.

1. What initially interested you in a study abroad experience?
2. Could you describe what your study abroad experience was like for you, what were your most significant experiences during your study abroad?
3. Do you feel the experience changed you in any way? Is there anything you see, understand, feel, value, or do differently today than before your trip?
4. What would you say is the most important benefit of a study abroad experience?
5. What advice do you have to other students embarking on a study abroad experience?

Data

Findings

Instructor-led Topic/Subject Focused Programs:

Epistemic and Philosophical learning transformations are the most cited.

Engagement Activity Instructor-Led Programs:

Personal Adaptive and Epistemic learning transformations are the most cited.

Immersion - University Semester Enrollment Programs:

Epistemic and Philosophical learning transformations are the most cited.

Bailey Scholars Research Team

The research is by the 2010 - 2011 Graduate Fellows of the Bailey Scholars Program: Natalie Graham and Pat Crawford; with Robert Brown, Eric Cova, Rhonda Cracker, Suzanne Lang, Reg Motley, and Brianna Ziegler.



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All of the study abroad types resulted in recognition of learning as the result of disorientation and a general shift in worldview for the students.

Instructor-led study abroad participants articulated the highest rates of everyday learning, possibly indicating that these programs promote the recognition of this skill. Interestingly, this type also indicated the least frequent recognition of learning outside of the curriculum.

This may indicate that instructor-led students recognized both the importance of everyday connection to learning and that this opportunity for learning was built into their study abroad curriculum. Their greater attribution of overall learning experience to curriculum is confirmed by the fact that these respondents also had the articulation of learning as reflection, indicating that the learning was encapsulated in the program itself and not as self-directed.

Engagement study abroad students articulated the most change in their conception and practice of learning.

The most frequent goal frequency of responses was 1.1 and 1.5. This seems to indicate that students on Engagement study abroad articulate a broader awareness of learning styles and techniques. Similarly, Engagement study abroad participants frequently articulated responses that indicated learning as resulting from disorientation. This may indicate a connection between recognizing disorientation as learning and recognizing multiple pathways to learning.

Instructor-led and Immersion program students articulated the highest rates of revision in their conceptions of nation and citizenship.

Engagement program participants indicated a greater recognition of themselves as individual problem solvers of everyday or challenging problems while they had the lowest recognition of national identities.

This difference among the types may be due to the fact that Engagement programs use projects as a core organizing feature of the program. These students may focus more on the daily requirements and tasks, increasing their awareness of themselves as embodying a particular national identity. Working with communities to solve problems seems to give these students a greater sense of their ability to solve problems.

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