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COMMUNITY NEWS & VIEWS

Our Wicked Problems: Working Together for a Better World

By Director, CCED, Rex LaMore Ph.D.

“Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist.”

KENNETH BOULDING

For the past two fall semesters I have had the opportunity to co-learn with graduate and undergraduate students at Michigan State University the concepts and practices of environmental planning. I find the course to be challenging, not only in terms of the materials we discuss, but also challenging in absorbing the full impact our human footprint is having on the ecological systems of our planet. From water quality/quantity, to air quality, to loss of prime agricultural land, to energy production and transportation, our presence on the planet is clearly noticeable. To some extent I often feel a certain cognitive dissonance between what the ecological sciences reveal to us about our human-environment relationship and our almost myopic focus on economic growth and development.

As a veteran in the community and economic development profession, growth and development often seem the only path available to us to improve the quality of life for many of our distressed neighborhoods. Growing the economy, increasing entrepreneurship, increasing product demand, expanding markets, more production and consumption seem to be our “holy grail”. They certainly seem to be the principle preoccupation of our public officials, community leaders, and the media. Our economic well being (for most of us that means...jobs!!) is paramount to almost all other concerns. Clearly in parts of our world providing for basic human needs such as food, shelter, clean water, sanitation, health care and education are of critical importance. In other parts of the world maybe it could be said, we have enough “stuff”. More “stuff” beyond a certain set of basic needs doesn’t seem to make us any happier¹, but our global

¹I highly recommend reading *The Spirit Level* by Wilkinson and Pickett, Bloomsberry Press, N.Y, 2009 for more on this.

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economic engine seems to ask that we keep on consuming to insure growth. This is where things get sticky....if our continued growth and development are essential to our perceived well being how do we as a species survive in a finite world where some resources are most certainly limited? A consumption driven economy seeking continuous growth and expansion seems in many ways not only environmentally unsustainable but dangerously pathological as a social goal. So what do we do?

Professional planners have coined a phrase for this type of societal dilemma; they call it a "WICKED PROBLEM"². Wicked problems are those situations where our goals are unclear (we lack consensus on our ultimate objectives) and our methods are untested (we are unsure how to get there!). What is noteworthy about these types of problems is how valuable universities can be as partners in tackling WICKED PROBLEMS. Universities can facilitate consensus building and design well informed experiments that can assist communities in testing new methods to address serious community problems...i.e. WICKED PROBLEMS.

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$$\int_0^{\infty} \text{Problem}^{\text{wicked}} dx = (\text{goals}^{\text{unclear}} + \text{methods}^{\text{untested}})$$

So here we are, well into to the 21st century struggling to find solutions to some of the greatest challenges human kind has ever faced. Challenges that will require us to build and articulate broad consensus on very contentious issues, and employ new methods, programs and policies that hold out the promise to mitigate these shared concerns. No easy task, with no assured outcome, until we try. The MSU Center for Community and Economic Development is committed, in its modest way, to assisting our communities in engaging in those processes that may help us alleviate some of our most WICKED PROBLEMS. I hope in the projects discussed in this newsletter and the related materials available on-line at our web page (www.ced.msu.edu) you will find some useful insights to help you move forward in your work to create and sustain our shared democratic civil society.

²I first came upon this term in *Mastering the Politics of Planning* by Guy Benveniste, Jossey-Bass Publishers, 1989

"The Matter of Origins"

By John Schweitzer, Professor, CCED

About 18 months ago I was asked to become involved in the evaluation of a contemporary dance project designed to interest and educate people in physics. The idea intrigued me. I have had a life-long interest in physics as a way of understanding how the universe behaves, but my involvement in dance, both as a participant and as a spectator was almost non-existent, and I had no idea how dance and physics, or art and science in general, might be related. However, I had a great deal of experience in

program evaluation, and this project was a challenge I couldn't resist.

Therefore, for the past year and a half I have been working with two wonderful colleagues on the evaluation of this project. Diane Doberneck, researcher at the National Collaboration for the Study of University Outreach, leads the evaluation team. We are assisted by Paula Miller, doctoral graduate student in the sociology department, and an advisory group consisting of MSU faculty and staff from the departments of physics-astronomy, theatre, CARRS, the Wharton Center for the Performing Arts, the MSU Museum, the National Superconducting Cyclotron Laboratory, and the Community Evaluation Research Collaborative of University Outreach and Engagement.

Choreographed by Liz Lerman and the Dance Exchange, "The Matter of Origins," is a two-part experimental program funded by the National Science Foundation (NSF) that engages the public in explorations of the nature of beginnings and the physics of the origin of matter. The Informal Science Education program of the NSF seeks to increase interest in, engagement with, and understanding of science by individuals of all ages and backgrounds through innovative learning experiences. The two acts involve contemporary dance in exploring historical perspectives and cutting edge physics about our beginnings.

In Act One, audience members watch as science concepts are translated into images, music, and dance. Dancers portray ideas such as the complexity of measurement, the ways atomic particles interact, and the origins of the universe. Science-themed, multi-media experiences including images from the Hubble space telescope, CERN, and replications of atomic bomb explosions accompany the dancing. In Act Two, audience members adjourn to a nearby room to enjoy tea, cake, and dialogue facilitated by discussion leaders called "provocateurs" representing the local science and arts communities. The tea experience includes dance interruptions and additional science content, to stimulate reflection through public engagement about the nature of science, limits of measurement, and meaning of movements, both big and small.

NSF funded the presentation of tea and the evaluation of The Matter of Origins as an informal science education project. NSF's main learning impacts for informal science education include individual changes in attitude, interest, knowledge, and behavior related to science. In addition to NSF's research questions, choreographer Liz Lerman, artists at the Dance Exchange, and CCED evaluation researchers were also interested in understanding connections between art and science, emotional engagement with the subject matter, the impact of the tea experience, and impact of the performance on groups historically underrepresented in the sciences.

The goals of this project are (1) to develop and test an innovative model for using dance, digital media, and structured dialogue to attract and engage public audiences in science content and processes and (2) to explore how artistic practices may have broader applications with respect to science learning and research. The intention is to explore how science can be represented in the art and in the experience and not simply interpreted into abstract choreographic expression with a program note. The evaluation team has been studying impacts both on the general public and on participating professionals including the dancers and the scientists and artists in the role of provocateurs.

“...to explore how science can be represented in the art...”

The challenge of the evaluation was to measure the impact of Act One, Act Two, and the overall performance in a way that would not take away from the audience members' experience. Together, the evaluators and the Dance Exchange developed research designs, instruments (which we called “measures”), and data collection processes, so that rigor and creativity were maximized.

In general, audience members completed pre-performance, intermission, and post-performance measures. These hard-copy surveys included quantitative (Likert-scale) questions measuring their attitudes, interests, knowledge, behavior about science; directed qualitative measures about their emotions (emotion clouds); open-ended qualitative questions about what struck them, and about science themes they perceived during the performance and tea. A follow-up measure was conducted using survey monkey a period of months after the performance to document the lasting impact. Audience members also provided background and demographic information, including race/ethnicity, gender, age, level of education, science background, dance background, and informal science education background.

Research designs varied from site to site depending on theatre arrangements for Act One and Act Two; particular learning interests at each site; and the evaluation team's evolving understanding of the materials. Data was collected at four university sites during the 2010-2011 performance season—University of Maryland, Wesleyan University, Montclair State University, and Arizona State University, and most recently at the Museum of Contemporary Art in Chicago.

Over 1500 people have attended The Matter of Origins and completed the evaluation research measures. We are still in the process of analyzing and interpreting our data but the preliminary findings indicate that the project is

succeeding in its goals of increasing the public's attitude, interest, knowledge, and behavior related to science. The performance has also had an emotional impact - people reported being more stimulated, intrigued, curious and engaged in understanding physics. Professional scientists, artists and the general public seem to have greater understanding of and interest in the connections between art and science. Results of our evaluation have been presented at professional meetings including the National Outreach Scholarship Conference, Imagining America, and the International Association for Research on Service-Learning and Community Engagement. Participants at our workshops and conference sessions have shown great interest in this method of using dance and dialogue to engage public audiences in the process and content of science.

Involvement in this evaluation research has broadened my perspectives on the connections between physics and dance and between art and science overall. I have realized that both science and art seek understanding and meaning through creativity. Both are deeply involved in the process of discovery. At the four universities where The Matter of Origins has been performed faculty members from the sciences and the arts have been brought together through participation in this project. I have observed how they have stimulated each other and have found benefits in the exploration of each other's fields. Currently at Michigan State University we are constructing the world-class Broad Art Museum and the FRIB, a national user facility for nuclear science. Based on my experience with The Matter of Origins, I believe it would be mutually beneficial to persons involved in each activity and to the university as a whole to find an event that links the two in a together in a celebratory and learning experience.

Taking Exporting in East Michigan and the Eastern UP to the Next Level: Developing Strategies with New Tools and Resources for Global Market Success

By J.D. Snyder, Project Director, CCED

Exporting provides a major key to Michigan's economic recovery and vitality. Helping Michigan companies sell goods and services in international markets has become a major focus of state, regional, and local economic development activities since 2010 when President Obama prescribed a national goal of doubling U.S. exports by 2015. This focus is paying off. In September, U.S. exporting had its biggest month ever with \$180 billion of business. Exporting provides a wide open avenue to expand markets for companies of all sizes. It's not just for the big guys. By expanding their markets through exporting, small and medium size enterprises (SMEs) can increase their revenues and profits, and hire new workers.

The MSU Center for Community and Economic Development received a grant of \$187,000 from the U.S. Economic Development Administration in July, 2011 to work with regional partners in East Michigan (Saginaw Bay) and the Eastern Upper Peninsula to support and encourage small and medium size businesses enter or expand export markets with an initial focus on Canada.

On November 4, eight companies and over a dozen local economic developers in East Michigan attended the kick-off workshop, Think Global, Go Global: Export Market Strategies to Improve Your Bottom Line, at Delta College near Saginaw. The workshop was also live-streamed to a business and economic developer audience at Lake Superior State University in Sault Ste. Marie.

J. D. Snyder, the project director, reported on the results of an online exporting survey conducted September 10-October 12, 2011 and provided an overview of the project objectives and future workshops. Based on the survey results, 43% (20 of 47 companies) currently export, and of these 30% (6) have less than 25 employees. These companies mainly ship to Canada (74%), followed by the UK (53%), Mexico (47%), China (42%), and Germany (37%). The value of 2010 Michigan exports to Canada was \$45 billion, an increase of 36% over 2009, showing that the state's economy was rebounding.



One of the most significant survey findings is that 90% of the companies surveyed that currently export want to expand their exporting business.

Tunga Kiyak of the MSU International Business Center (IBC) described the MSU IBC's wealth of exporting resources and their completely-redesigned globalEdge web site. Based on workshop feedback, businesses were amazed at the scope and depth of MSU exporting resources.

Tom Gross of Dynamic Manufacturing in Weidman, Michigan (northwest of Mt. Pleasant) gave a richly-textured presentation on his company's experience in developing export markets for their wood chippers. His story included their adventures in successfully developing Russian markets.

Bruce Brogan of Fifth-Third Bank provided an informative overview of export financing and the critical role of letters of credit. He answered a lot of the questions about how to be sure you get paid when you ship products or services to foreign markets.

Anita Walker of the U.S. Export Assistance Center described the extensive services provided by this federal agency which is a part of the U.S. Commercial Service in working with companies to help them reach and penetrate foreign markets. The U.S. Export Assistance Centers in Pontiac and Grand Rapids are directly linked to over 100 U.S. Commercial Service offices worldwide that Michigan companies can access to penetrate new markets for their products and services.

Check out knowledgeplanning.org for project updates and valuable export assistance information. Or call J.D. Snyder at 517-353-9555.

CCED IS WORKING WITH T.E.A.M.517 TO STOP THE VIOLENCE IN LANSING

By John Schweitzer, Professor, CCED

Last month over 400 people gathered on the steps of the Capitol Building in downtown Lansing to respond to the violence that has afflicted the city in recent months and years. The event was organized by T.E.A.M. 517, a local group formed to make Lansing a better place by bringing people together. The acronym TEAM stands for "Together Everyone Achieves More."

The rally was designed to open lines of communication among those who have been affected by violence, to facilitate a healing process, and to draw the community together to address the issue of violence. The interest among Lansing area residents in reducing violence is evidenced by the 6,325 persons who have joined the group on Facebook.

Attendees at the rally were asked to fill out a survey to determine what issues were important to them. CCED is working with T.E.A.M. 517 to help analyze and interpret the findings of the 253 completed surveys. Among the surprising findings from the survey is the fact that almost 80 percent of the attendees were familiar with someone who died due to a violent crime, and 93 percent of the attendees indicated they were interested in helping the work and mission of T.E.A.M. 517.

Seven issues were ranked by the attendees in order of importance. Education was by far the most important issue, with over half ranking it as the most important, followed by the issues of crime and unemployment. Crime was a more important issue for women while unemployment was more important for men.

At a follow-up rally held on Saturday, December 17 in the Capital Area District Library the results of the survey were presented. More information can be found at the website, www.team517.com or visiting Lansing Stop the Violence Rally group on Facebook.

Regional Economic Innovation

By Jennifer Bruen, Project Coordinator CCED

In October 2011, the MSU Center for Community and Economic Development was designated by the U.S. Department of Commerce, Economic Development Administration to work with other colleges, local and regional governments, private businesses, and other groups to identify new innovative economic development ideas and practices focusing on ways to create businesses and jobs.

This new Michigan State University EDA University Center Regional Economic Innovation (REI) Center, will establish a unique new-economy development ecosystem for the state of Michigan. From this engagement will come new mindsets and development practices that are congruent with the new global and regional economic realities and make available the assets of Michigan's universities for the support of: (1) regional commercialization efforts; (2) advancing entrepreneurship; and (3) cultivating a high-skilled regional work force. It will be a model of responsive community engagement, strategic partnerships, and collaborative learning.

The REI goals will be accomplished through dynamic networks between Michigan higher education institutions, local public and private sector leaders, workforce development boards, community action agencies, state agencies, public utilities, commercial lenders and EDA Economic Development Districts. The dominant means of communication will be face-to-face meetings for the Consultative Panel and electronic interactions for the various networks. This networking structure is feasible based on the experience and continuous maturation of the capabilities of MSU CCED.

The program will contribute to the economic revitalization of communities in Michigan through the identification of economic development ecosystem gaps and systematically extending valued knowledge and resources through a collaborative networking process. REI, with partners, will collaboratively develop and implement an annual program of **five interdependent activities on a five year cycle**:

- Identify and develop innovative tools, policies and models in economic development
- Share current and potential local innovative practices
- Identify, select and support student led-faculty guided feasibility and technical assistance projects
- Continually network and assist with knowledge transfer through webinars
- Host the annual, "Innovate! Michigan" summit

In December the REI Center identified several applicable

technical assistance projects that will be conducted over the winter 2012 semester at Michigan State University and other locations. The projects will be student led- faculty guided and include port studies for the cities of Cheboygan and Alpena; the creation of a land use plan for vacant land in Genesee County; the creation of a new on-line economic development tool by Eastern Michigan University and the research and development of new innovative economic development proposals for Detroit by Wayne State University. These projects will not only benefit the students in their learning process but will also be an affordable way for these communities to attain feasibility studies as they consider different types of economic development projects.

REI has also been very busy inviting hundreds of scholars and practitioners to be members of the REI center's consultative panel or on one of the six newly established networks: Regional Talent (RT), Discovery to Market (DtM), Innovative Infrastructure (II), Growth and Equity (GE), MSU Coordination (MSUC) and Higher Education Research (HER). The response has been very positive and currently there are 15 consultative panel members and the networks continue to grow.

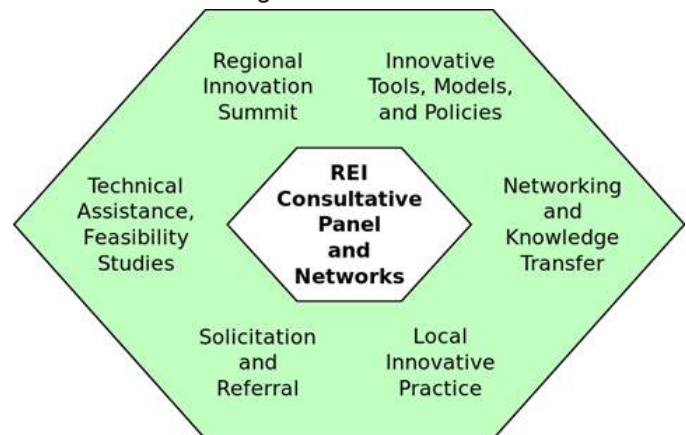


Figure 1 - REI Model

If you are NOT already on a network and would like to be, please contact Jennifer Bruen 517-353-9555 or bruenjen.msu.edu. In becoming a member you will be involved in a collaborative process to create and develop cutting-edge ideas for new economic development policies, models, tools and practices for the state of Michigan. In the meantime, you can check out our new website www.reicenter.org, on the site you can submit an idea to REI to be shared. We want to hear your ideas!

This new MSU University Center for Regional Economic Innovation is led by CCED Director, Dr. Rex LaMore and coordinated by Jennifer Bruen. For more information please contact Jennifer at bruenjen@msu.edu or 517-353-9555.

ArtSmarts Among Innovators: What's Next?

By Megan VanDyke, Project Assistant, CCED

An interdisciplinary research team at Michigan State University is investigating links between lifetime exposures to arts and crafts and innovative work in the sciences and technologies. At issue is training in creative process. The researchers hypothesize that learning to be adept in arts and crafts develops imaginative problem-solving skills that transfer to scientific, technological, and entrepreneurial endeavors.

Last March, the team released a report titled "ArtSmarts Among Innovators in Science, Technology, Engineering, and Mathematics (STEM)" which is viewable at: <http://ced.msu.edu/techresearchreports2010.html>.

The team is currently gathering information on the arts and crafts backgrounds of engineers who are members of the National Academy of Engineering, in order to compare their arts and crafts involvement to that of the Michigan State Engineers and members of the MEDC, who were surveyed previously. At this point, it appears that members of the National Academy of Engineering are quite active in participating in arts and crafts and the team will continue to explore the connections of those activities to the production of "creative capital," such as founding companies and creating patented products.

Members of the team have also written an article for the Economic Development Quarterly concerning the necessity of arts and crafts to economic innovation, which has been accepted and is currently being edited. Meanwhile, the team is working on an abstract to submit to the National Endowment for the Arts Symposium on "The Arts, New Growth Theory and Economic Development".

For more information contact Amber Peruski (perusk6@msu.edu) or Megan VanDyke (vandyk66@msu.edu) or call the CCED at 517-353-9555.

Michigan Urban Core Mayors

By Gino Washington, UCM Coordinator, CCED

The Urban Core Mayors is a forum hosted by MSU CCED. It was established in 1992 with mayors of Grand Rapids and Detroit as co-chairman. The 12 cities involved at the time realized such a forum for central city leaders in Michigan to cooperate on issues of mutual concern could only improve the interests of the state's urban areas. This cooperative approach to state municipal development allows the mayors of Michigan's 13 core cities to discuss finding common solutions to common problems while also working together to make their cities and Michigan in turn

more viable. The mayors of Detroit and Grand Rapids at the time realized that such a forum would improve. These 13 cities collectively are populated by about 1.6 million people and their metro areas have over 80% of Michigan's population. The cities have their mayors represented in the UCM are:

- Ann Arbor
- Battle Creek
- Bay City
- Dearborn
- Detroit
- Flint
- Grand Rapids
- Jackson
- Kalamazoo
- Lansing
- Muskegon
- Pontiac
- Saginaw

On Wednesday, September 21st, 2011 the Urban Core Mayors had their most recent meeting. Attendance included Harvey Hollins the Director of Governor's newly created Office of Urban Initiatives.

The discussion centered on advancing Michigan's cities towards economic stability while working concurrently with Governor Snyder. Hollins informed the mayors that though he would be based in Detroit, the newly created Office of Urban Initiatives would have offices in Flint and Grand Rapids as well. To improve the governor's ability to help each city individually and market them outside of Michigan's borders, the mayors shared the assets and aspirations of the municipality he or she governed. This interaction will no doubt improve the ability of state government to make policies that will improve the quality of life in Michigan's core urban areas.

Not to be forgotten was the introduction of MSU CCED's new internship program with the Urban Core Mayor. MSU CCED is sponsoring a program of that allows MSU students to work in a mayor's office as a student intern. These "Urban Core Mayors" Fellows will learn the intricacies of working in public office, as well as, management skills that will educate them in skills useful to helping Michigan's economy. This program also gives the mayors the opportunity to work with quality people from Michigan State University further cementing the legacy and reputation of Michigan State as a fine academic institution.

MSU CCED is proud to have been given an opportunity to provide the mayors of Michigan's core cities a forum. We will continue to support the mayors in their endeavors to make Michigan greater.

For more information contact Gino Washington (washi157@msu.edu) or call the CCED at 517-353-9555.

Who's New in 2012?

By Nicholas Beesley, Media Tech. Coordinator, CCED

Our Faculty Board of Advisors here at the Center for Community and Economic Development has played such an integral part in our recent projects. The board of advisors was established to facilitate shared learning among faculty members, students, and others; advocate outreach scholarship within Michigan State University and communities; and recruit and support the engagement of students in CCED outreach activities. In 2011 the Faculty Board of Advisors have participated in meetings with the Urban Core Mayors, supported the Michigan Avenue "Thinkers and Doers" events, and was involved in the 2011 Annual Institute webinar series from the Center about re-sizing communities.

Recently, our Faculty Board of Advisors added four new faculty members each bringing new ideas to the table from their diverse backgrounds. The first of the new additions, Dr. John Monberg, is a core faculty member in Global Studies in Arts and Humanities at Michigan State University. He teaches in Writing, Rhetoric, and American Cultures and has a research background in the growing field of cultural studies of new media technology. Another great addition is Dr. Cynthia Jackson-Elmoore who is the Dean of the MSU Honors College and has interests in urban politics and policy. Meanwhile, Michael Polzin brings to the table expertise in labor-management cooperation and workforce development practices. Lastly, Dr. Eileen Roraback is the Associate Director for MSU's Public Humanities Collaborative focusing on the engagement of both faculty and students to engage in public works to help solve public problems.

We here at the MSU Center for Community and Economic Development look forward to the contributions of all of our advisors in outreach scholarship and engagement here at MSU and in the surrounding communities.