

CEW Response to the External Advisory Committee Findings & Recommendations

Submitted to Diana Hess, Dean, School of Education

By Mitchell Nathan, Director, Center on Education and Work

August 22, 2015

Purpose of this Report

This report offers a set of responses to the recommendations put forth by the External Advisory Committee upon review of the Center on Education and Work (CEW).

On March 26, 2015, at the request of Center Director Mitchell Nathan, and Associate Dean and Center Director Bob Mathieu, CEW had the great fortune to bring together a talented and dedicated External Advisory Committee (EAC; see Appendix A) to provide insights and recommendations in 4 focal areas integral to the future of CEW:

1. Fruitful directions for CEW's Strategic Plan,
2. CEW capacity and fit to its strategic plan, including organizational, leadership, and facilities considerations
3. CEW visibility and marketing, including national and international markets, SOE and UW campus relations,
4. The potential for the new research initiatives

The EAC produced a report of its findings and recommendations:

1. Create a strategic plan to transform CEW into a sustainable research center; this plan should be complete by June 30, 2016.
2. Revise the mission statement to reflect in what specific areas CEW wishes to have impact in future
3. Conduct an environmental scan, a needs assessment, and a strengths, weaknesses, opportunities and threats analysis.
4. Review the organizational structure and carry out a staff evaluation and assessment.
5. Bolster the leadership position by granting the director a 2-year release at 100%, plus a staff scientist to assist him.
6. Build a relationship with the School of Education Dean and others on campus and create campus partnerships; introduce the "new" CEW to potential partners through a short document showing the strengths and new vision of CEW.
7. Improve office and meeting facilities.
8. Develop a marketing plan.
9. Explore forming a non-profit that promotes product development and marketing
10. Formalize opportunities for: affiliates, fellowships, partnerships, and internships.
11. Have a 50th Anniversary Celebration & Report That Honors CEW's Accomplishments

In framing our responses to the recommendations, we chose to prioritize them into *primary*, *secondary*, and *tertiary* levels, based on their perceived urgency and importance for the future of CEW. As preparatory to these responses, we first offer a very brief description of CEW, its history, and the new vision guiding its efforts.

What is CEW?

A Brief History of CEW's Mission and Contributions

CEW was founded in 1964 as a [UW Campus Research Center](#), focused on research and outreach to provide resources to the citizens of Wisconsin to foster lifelong career and workforce development to promote acquisition of a sound economic future. These were chiefly implemented through online career information systems (WISCareers and CareerLocker), professional development for career counselors, school-to-work transition, and education-industry partnerships. [CareerLocker](#) (now the official name of WISCareers in the US) is currently used by over 260,000 students in Wisconsin K-12 schools, in addition to clients in youth apprenticeship programs, and adults who utilize any of the State Comprehensive Job Centers.

Many of CEW's professional development services were provided through the annual Careers Conference (1986-2013), which, at its peak, served the professional development needs of some 1700 national attendees. Several times each year, CEW also provides [career institutes](#), and certification courses for [Career Development Facilitator \(CDF\) Training](#), [CDF Instructor Training](#), as well as other training opportunities.

In 2009, online services expanded to Singapore with [eCareers.sg](#) where it is used by all of the middle schools and high schools in the nation, through a contract with the Ministry of Education. In 2009, eCareers received two international awards for being one of the top IT applications in the ASEAN region. eCareers is used by over 600,000 students and adults each year.

In these ways, CEW very directly pursues the aims of the *Wisconsin Idea*, that "the boundaries of the University are the boundaries of the State."

A Forward-Looking Vision for CEW

With the appointment of a new Director in 2012, CEW has been developing a new vision, with these central ideals:

- **Career Planning.** The emergence of computer information systems provides powerful new ways to organize personal and labor market information, assist users to learn about the principles of career theory, and provide ways to browse, search, and manage vast amounts of career information, education opportunities, and training programs. Contributing to the development and growth of online career information systems in the US and worldwide is central to the core mission of CEW. CareerLocker (in the US) and eCareers (in Singapore) each have reached hundreds of thousands of users. At CEW, we have come to appreciate the need for a guided experience through the vast amount of career information and continue to build developmentally appropriate curricula, to explore ways parents and children can engage in career exploration together, and to investigate ways CareerLocker and eCareers can become a tool for lifelong use, from K-12 through retirement. Currently, this includes increased attention to adult users seeking employment, and post-secondary audiences in 2-year and 4-year colleges and graduate programs. We

are also look for opportunities to gradually expand our presence in US and Asian markets.

- **Supporting Data-Driven Decision Making.** In addition to its traditional role of career and workforce development, users of CareerLocker (with over 700,000 users in the US between 2009-2014) and eCareers.sg (with approximately 300,000 current users in Singapore) generate a great deal of valuable data that can be effectively used to improve the system design, and contribute to evaluation and marketing; including: personal inputs (e.g., race/ethnicity, gender, impairment status, personality type), self-efficacy, academic, community-based and work-based learning experiences, outcome expectations, and background contextual affordances (e.g., family social support and role models). We also collect user log data on the webpages visited, time spent on career and education webpages, and saved career pathways, jobs, and education and training programs. A new initiative for CEW is to develop data store across our large user base to (1) improve future system development, (2) support system evaluation, (3) direct our marketing efforts (and gain advantages over our commercial competitors), and (4) investigate significant research and policy questions, both cross-sectionally and longitudinally, regarding social-cognitive career development.
- **Professional Training.** The role of informed professionals is critical for effective career and workforce development. We continue our commitment to the highest quality training opportunities for career facilitators and trainers of facilitators that conform to the National Career Development Association (NCDA) in the US, and global certification through the Center for Credentialing and Education, a subsidiary of the National Board for Certified Counselors (NBCC). We are expanding our course offerings to suit the varying needs and schedules of participants, including online coursework, two-day intensive face-to-face trainings, and hybrid courses.
- **Research as the “Connective Tissue” for Long-Term Advancement.** Research on workforce alignment (from anthropological and policy perspectives) and career development (from psychological, sociological, and public policy perspectives) can serve as a way to integrate each of the other major initiatives (career planning, professional training, and data-driven decision making) and to contribute to their development and efficacy. In order to collect the appropriate, high quality data, there is a need to refine and update our data collection procedures and be more systematic about its collection across the entire user base. We are also looking into ways to maintain lifelong utilization, which would provide users with continuity as they pursue careers and educational programs across their lifespans. It would also enable CEW to conduct meaningful longitudinal research that could contribute to current social cognitive career theory and workforce development policies.

Several research grant proposals (see Appendix B) have been submitted to fund initiatives of this sort from federal and private foundation sources. Example research questions from these grant proposals include:

- Workforce development: How do people *now* look for work in the digital age?
 - Education provides affordances and constraints

- Do people find the jobs they are qualified for?
- Documenting the effects of a New “Digital Divide”, where the Tech-Haves enjoy far broader and more rapid access to current job openings than the Tech-Have-Nots
- K-12 Career Development: Scaffolding “What I want to be when I grow up”
 - People lack strong career and academic planning skills. They often misperceive the skills they have and the skills jobs require, and spend little time making informed career choices.
 - To overcome these barriers, the proposed intervention will use the *Academic and Career Planning Curriculum*, developed in collaboration with the West Allis West Milwaukee School District, an innovative approach to improve young people’s self-awareness of their skills and experiences, interests, and goals (*Who am I?*), inform them of the economic and societal value of occupations (*Where am I going?*), and improve career planning and choice behavior (*How do I get there?*).
- Broadening career opportunities (e.g., STEM fields) by increasing self-efficacy via targeted interventions
 - Curriculum to promote STEM career development
 - Identification with family and community role models
 - Flexible online searching and matching algorithms

In addition, with funding from the National Science Foundation, staff at CEW are conducting empirical field research to document and further understand the (mis) alignment between employer expectations and worker proficiencies (i.e., the “skills gap”).

- Through interviews with over 200 employers and educators in advanced manufacturing and biotechnology, and site visits to 60 companies and 21 postsecondary institutions throughout Wisconsin, we aim to shed light on the state of the alignment between the educational sector and industry.
- One goal of this research is to inform public policy, with increased emphasis on vocational training, tuition for fields perceived as “job-ready” and critically evaluate the value of a liberal arts education
- Another goal of the study is to provide recommendations regarding the curriculum that balances the needs of employers and educators.

Committee Recommendations and CEW Responses

Primary Recommendations

1. Create a strategic plan to transform CEW into a sustainable research center; this plan should be complete by June 30, 2016.

2. Revise the mission statement to reflect in what specific areas CEW wishes to have impact in future.
3. Conduct an environmental scan, a needs assessment, and a strengths, weaknesses, opportunities and threats analysis.

Response

The CEW administrative team hired an outside facilitator to conduct a SWOT analysis on April 30, 2014. We plan to hold a retreat by Feb. 1 2016 on our new mission statement and priorities. By April 30, 2016 we will do a comparative analysis of CEW with similar career and workforce development R&D centers in the US. By June 30, 2016 we will produce a new strategic plan for the center building on these activities.

In the spring of 2015, we began the process of conducting strengths assessments of individual staff members of the Wisconsin Career team, which will continue during the 2015-2016 academic year as we bring on new staff.

4. Review the organizational structure and carry out a staff evaluation and assessment.

Response

The composition of CEW staff is going through rapid change after a long period of relative stability. As of early August, we have seen changes in personnel of all of the senior staff compared to 5 years ago, and we will have replaced or reassigned approximately one-third of our staff. Along with this has been a rethinking of staff roles and how the various center projects interact. Following the release of the new strategic plan in summer, 2016 we will conduct a full review of the organizational structure in terms of the new strategic initiatives, along with staff evaluations and staff assessments, to be completed by December, 2016.

5. Bolster the leadership position by granting the director a 2-year release at 100%, plus a staff scientist to assist him.

Response

Currently, the director has a 0% appointment to CEW, along with a full-time faculty appointment in the Educational Psychology Department, and all of the regular departmental duties for teaching, service, and research load. Clearly, this is not sustainable. Plans for a 2-year leave, and other models need to be explored with the Dean's Office and the director's home department.

Secondary Recommendations

6. Build a relationship with the School of Education Dean and others on campus and create campus partnerships; introduce the "new" CEW to potential partners through a short document showing the strengths and new vision of CEW.

Response

For the past several years the communication between the Center director and the Dean of the School of Education has been mediated through frequent interactions with the Associate Dean for Research. While these interactions have been productive, it has also left CEW somewhat on the sidelines of conversations about the strategic directions of the School and the University, and the ways that the Center contributes to these initiatives. This is not in the best interest of the Center or the School and this committee recommendation clearly signals a need to change this in the near future. The annual reporting mechanism seems to be a one-way exercise that has not benefited either the Center or the School.

Moving forward, the CEW administrative team members need to make a concerted effort to have sustained communication with the Dean's Office, starting with the new Dean. We propose to set up quarterly opportunities for dialogue with the Dean and her staff, starting with an invitation to have the Dean visit CEW. As part of our interpretation of this recommendation, we also see the need to educate SOE and UW Campus and UW System personnel about the career and workforce development offerings and accomplishments of CEW.

This report and presentation are one such means of communicating CEW's accomplishments and offerings, and to reach potential clients and R&D partners. Currently, we are also in talks with the School of Education Career Center (Charlotte Walker) and the L&S Office of Career Services.

We also see the need for new efforts to contribute to campus-wide initiatives to support student career development by targeting

- Dept. of Rehabilitation Psychology & Special Education (RPSE)
- New student orientation organizers
- The Delta Program
- TAA announcements
- Campus FIGs

7. Improve office and meeting facilities.

Response

CEW is currently split between two half floors (on the 9th and 10th floors of the Educational Sciences Building). The structure follows function, but also reinforces divisions and exacerbates the problem of missed opportunities for exchange of ideas and talent. The two long-term break out rooms managed by CEW recently became part of the common pool of conference rooms for the Educational Sciences Building. The highly interdisciplinary nature of career information systems development (e.g., programmers, artists, career theorists, marketing personnel), and the need for reliable spaces for lengthy, unplanned but critical group meetings necessitate resources to enable flexible group meeting space.

The CEW Director is currently in discussion with the WCER Director about long-term space needs to promote creative and productive collaborative interactions among the CEW development teams.

8. Develop a marketing plan.

Response

CEW is poised for growth, but seeks to do it in a controlled manner. Along with our in-house marketing team, we are currently in discussions with Wisconsin Center for Educational Products and Services (WCEPS) about our marketing needs.

Our first step is to sketch out short-term and long-term marketing goals and timelines for when a marketing plan could be in place that follows the Center's current and forthcoming strategic plan. WE see these efforts as fitting under two general categories: Expanding our market base for current products and services; and extending how our products and services are delivered. The marketing areas targeted include:

- Expanding our market base
 - US States and districts
 - Charter schools
 - Home-school networks
 - Youth apprenticeships
 - Higher Ed (4 year, 2 year/Tech colleges)
 - Expand in ASEAN and other countries
 - Adult workforce development

- Extending how our services are delivered
 - Mobile devices, including tablets
 - Public kiosks (e.g., libraries, community centers, etc.)
 - Webinars
 - Virtual conferences

9. Formalize opportunities for: affiliates, fellowships, partnerships, and internships.

Response

A powerful way to share our resources and expand our impact is to offer multiple models for involvement with CEW. Students can obtain access to enriching opportunities through a formal internship program where they contribute to a targeted need for CEW R&D efforts (e.g., design activity, data collection and analysis) with assigned mentorship. Having now supported a small number of informal internships, we anticipate creating a formal program with relevant campus departments and programs.

Partnerships with non-UW entities extend our capacity and influence. We currently maintain several valuable partnerships throughout the US and internationally, and we will continue to devote the time and resources to maintain these.

Fellowships offer junior scholars opportunities for professional development while contributing to R&D needs of the Center. These typically come with funding for participating fellows and explicit professional development programs and milestones. These are written into current federal grant proposals, but until these are funded we do not anticipate supporting these internally.

An affiliate program would provide clear directions for pursuing and maintaining valuable collaborations with senior personnel who have expertise to share with CEW and who benefit from our existing resources and professional connections. We anticipate starting this program in the 2015-2016 academic year, starting with current UW collaborators.

Tertiary Recommendations

10. Explore forming a non-profit that promotes product development and marketing.

Response

This is an intriguing idea that could potentially expand the marketing, development and growth of services and products. Establishing an affiliated company might also provide CEW with greater flexibility when competing for future contracts and awards against commercial competitors. We are in discussion with WCEPS about the potential benefits and costs of this initiative. Decisions in this regard will have to be done in light of our forthcoming strategic priorities.

11. 50th Anniversary Celebration & Report

Response

The invitation to celebrate the accomplishments and evolution of CEW is a welcome suggestion. Overwhelmingly, the Center administrative team preferred instead to devote our limited resources toward the development of a new mission statement, strategic priorities, and marketing plans, choosing to move forward rather than celebrating the past.

APPENDIX A

Members of the CEW External Advisory Committee (EAC), March 26, 2015

Molly Carnes, MD, Professor, UW–Madison School of Medicine & Public Health, and Director, UW Center for Women's Health Research

Alan Burkard, PhD, Coordinator of School Counseling, Marquette University

Kathy Eidsmoe, Educational Consultant, CESA #1 Career and Technical Education

Nelse Grundvig, MA, Labor Market Information Director, WI State Dept of Workforce Development

Jennifer Heintz, Assoc Admin Specialist, WCER, UW–Madison

Kevin Niemi, PhD, Outreach Director, WISCIENCE, UW-Madison

Margaret Rubin, MS, Director-College & Career Pathways, Fox Valley Technical College

APPENDIX B

Example Grant Proposals

Grant proposals submitted (funded)

CEW is invested in developing a research program on education-workforce dynamics, particularly the relationship between postsecondary curricula and workforce needs. To date, one proposal has been developed, submitted, and funded on this topic.

National Science Foundation (EHR Core Research Program). *Exploring the Alignment Among Employer Expectations for STEM Skills and the Design of Education Curricula and Interventions (2013-2016)*, \$562,022.

Through interviews with over 150 employers and educators, and site visits to 60 companies and 21 postsecondary institutions throughout the state of Wisconsin, we aim to shed light on the state of the alignment (or misalignment) between the educational sector and industry. Another goal of the study is to provide recommendations regarding the curriculum that balances the needs of employers and educators, as well as recent evidence from the learning sciences regarding how to best cultivate diverse skills sets that facilitate student success. (<http://alignmentstudy.wceruw.edu>)

Grant Proposals Submitted (not funded)

CEW is also invested in developing a research portfolio that explores the career development and job-seeking patterns of youth and adults as they involve online resources such as CareerLocker. To date, three proposals have been developed on this topic:

1. *Hymen Milgrom Supporting Organization: Successful Pathways from School to Work Program (\$750,000)*.

The 3 aims of this proposal were to: (1) examine the baseline relationship between participants' pre-intervention levels of academic achievement and career-readiness skills, interests, and perceived self-efficacy, with initial career choices, (2) Investigate the effect of academic and career planning in CareerLocker on measures of academic attainment (grade-point average, absenteeism, dropout rates), interest, career self-efficacy, and workforce attainment (job application submissions, wage information), and (3) Use online log data of participants' usage to collect an unusually rich data set for documenting treatment level and the job-seeking process. These data will allow us to conduct natural experiments assessing how differences in academic and job attainment are affected by variation in treatment dosages.

2. *Retooling for STEM Occupations: An Investigation of Job-Seeking Behaviors and Career Development of Dislocated Workers (NSF-REAL - \$1.5M, 5 years)*

This proposal addressed three basic research questions about STEM workforce development: (1) How do people initially look for employment? (2) How do job-seeking behaviors change with training and tools specifically aimed at STEM career development? (3) What factors predict STEM job attainment? The project addressed these questions by

studying the behaviors of dislocated workers (N = 10,000) and other adults (N = 6,000) using Wisconsin Department of Workforce Development (DWD) Title 1 unemployment programs, who participate in the STEM Academic and career Planning Program (STEMAPP), an innovative approach to improve workers' self-awareness of their STEM skills and experiences, interests, and goals (Who am I?), inform them of the economic and societal value of STEM occupations (Where am I going?), and improve their career planning skills and choice behavior (How do I get there?). The intervention used two online resources: Skill Explorer, developed by DWD, enables users to flexibly search for jobs most similar to their knowledge and skill set, and to identify aspirational occupations that will match with additional education; CareerLocker, developed at the University of Wisconsin, organizes users' educational and extracurricular experiences, increases access to academic, career, and workforce development resources, and builds skills essential for career planning, job seeking, and job attainment.

3. *Exploring the Role of Online Youth Career Planning Tools for Broadening Participation in STEM Careers (NSF-EHR Core Research \$1.5M, 3 years)*

This proposal investigated ways to broaden participation in STEM career pathways of a broad range of underserved youth (N = 3,600) by increasing participants' self-awareness of their current skills, enhancing their self-efficacy, and strategically building their capacities for STEM academic and career planning. The project focused on Wisconsin youth currently receiving services through the Workforce Investment Act of 1998, which enacts workforce preparation and development programs statewide for youth from socioeconomically disadvantaged homes and communities, girls and young women, and those reporting disabilities. The proposed primary outcome of this investigation was an empirically supported model of STEM career development using Social Cognitive Career Theory (SCCT) that would have informed future experimental research and program designs for enhancing STEM participation for underserved youth (ages 14-21).

4. *What Do I Want To Be When I Grow Up? The Need to Better Understand How Education Prepares Young People To Make Career Choices in the Digital Age (AERA Conference Funding \$35,000 for 3-Day Workshop)*

This proposed 3-day workshop brings together 16 participants from education research, career and technical education (CTE), school counseling, career information systems, workforce development, and research methods who are contributing to theoretical, methodological, and curricular/technological advancements for understanding and improving the developmental progression from K-16 education to the workforce. Each presenter will provide a white paper to participants one month prior to the meeting addressing these orienting questions:

What do we know and what do we need to know about how one's educational experiences influence how they find post-secondary STEM employment in the digital age?

How can we enhance opportunities to secure rewarding STEM occupations?

The **central objectives** of this meeting are to advance the research base on the relation of K-16 education to STEM workforce development by: (1) **reporting** on the current state of knowledge of STEM workforce development; (2) **synthesizing** findings to support knowledge building and future investigations; and **designing** evidence-based innovations to foster career development. The collected white papers and syntheses will be compiled in an online proceedings hosted by the Center on Education and Work, and offered to the AERA Books Editorial Board for consideration.

Grant Proposals (under review)

5. Understanding and Cultivating STEM Career Development (NSF-EHR Core Research \$1.2M, 3 years)

The proposed **Level 2 project** fits in the strand of **Broadening Participation Research** by investigating the mediators and moderators that influence STEM career choice goals and actions of students who attend middle and high school in an ethnically and socioeconomically diverse, urban school district. Many youths who are historically underrepresented in STEM, as well as many in the majority White culture, do not believe they have the requisite skills and knowledge to land and maintain a STEM job, or the aspirations to pursue STEM training or advanced studies to qualify for high-need, high-pay STEM occupations. The **central aims** of this research proposal are to: (1) empirically investigate theoretically grounded reasons why certain groups are systemically underrepresented in STEM career pathways during middle school and high school, and (2) improve these students' STEM self-efficacy by developing curriculum activities and online resources that foster healthy career development. The **primary outcome** will be an empirically supported model of STEM career development that informs future experimental research and program designs for enhancing STEM participation for underserved youth.

Theory of Action: By expanding young people's access to information about the economic and societal value of STEM jobs, increasing awareness of their own skills and accomplishments, and illustrating ways that STEM careers match their skills, goals, and interests, the project is expected to increase students' perceived self-efficacy for STEM and move their career choice goals and actions toward STEM career pathways. The University of Wisconsin-Madison Center on Education and Work, partnering with the West Allis-West Milwaukee School District, will study the cognitive and affective factors and career choice goals and actions of urban middle and high school students ($N = 5,000$). Participants will use an new academic and career planning curriculum to increase awareness of their own STEM-related skills, and online resources that will match their skills and aspirations to a range of STEM occupations and academic programs. While the curriculum provides a structure to the various career development activities, computer log data of the active, online process of exploring career pathways and reflecting on why certain occupations are appealing to the student, delivers a rich set of behavioral data that is rarely used to inform career development research.

Qualitative, longitudinal research methods for a subsample ($n = 50$) of participants are coordinated with large-scale quantitative methods in order to contextualize career

exploration behaviors and decision-making processes in narrative form within the natural social setting of the home and family. Case studies will illuminate the nature of STEM career exploration and decision making for students from majority and historically underserved groups.

Grant Proposals (in preparation)

At the present time a proposal is being developed for submission to the National Science Foundation that will build upon the current study exploring the alignment of education and employer needs in Wisconsin. This study (PI Hora) will involve replicating the WI-based study in five metropolitan areas across the country that have high concentrations of STEM jobs in collaboration with a team of physicists and communication specialists at the Rochester Institute of Technology. The study will examine the degree to which educators and corporate trainers are focusing on four key non-cognitive skills (communication, work ethic, problem-solving, teamwork), how students and employees are experiencing their organization's valuation of these skillsets, and the overall nature of sectoral alignment in each region. Part of the study will entail holding 1-day conferences in each region to share findings with study partners and key stakeholders, as well as training and technical assistance in how to teach non-cognitive skills. Funding for this related activity is being sought through the Helmsley Charitable Trust.

A resubmission was initially invited by the Hymen Milgrom Supporting Organization for the proposal Successful Pathways from School to Work Program (\$750,000), for April, 2015. However, when that call was finally released in March 2015, it was only open to University of Chicago graduate students with UC faculty supervision. WE intend to approach the foundation again in response to future calls.