

**METTE Data Retreat and Advisory Board Meeting: A Summary**  
**Milwaukee Area Technical College, August 15-16, 2013**

On August 15-16, the Local Leadership Teams (LLT) and other key stakeholders met for two days at Milwaukee Area Technical College to jointly review and assess our implementation. This summer represents the mid-point in our four-year project, so it is an important opportunity for reflection and planning. With more than 40 LLT members, project advisory board members, and researchers in attendance, the agenda included updates on each of the campus level NIC (Networked Improvement Community) projects, as well as discussions about future data-collection and “broadening impact” and dissemination activities.

At Fox Valley Technical College (Appleton), METTE efforts are focused on enhancing student recruitment and retention in two major METTE career pathways. Plans are underway for a FVTC-High School Partnership, which will use extensive data analyses to identify school-level and student-level factors associated with early and accelerated student success at FVTC. Launched this summer by a team of Machine Tool faculty members, the Career Jump Start project has certified five high school CTE teachers to offer three dual credit/college-level courses. This fall high school principals will be provided with detailed Student Success Snapshots profiling the status and success of their 2008-10 graduates at FVTC. Eventually, these profiles will be converted to a searchable database that students, instructors, and others can use to support exploration and planning decisions regarding college readiness and college success.

At Waukesha County Technical College (Pewaukee), new campus-wide initiatives aim to improve fall-to-spring retention for students in electronics programs. WCTC has already rolled out a mandatory new student orientation and an early alert system to track the status and progress of new METTE students. The UW research group has completed a baseline study using currently available data from WTCS office, observed two orientation sessions and offered recommendations for gathering student satisfaction with the event and information provided. Currently, they are collaborating on ways to document the outcomes and to evaluate the effectiveness of both initiatives. The short-term evaluation project will be done by spring 2014. The team has two long-term goals: (a) an ongoing process for measuring students' developing perceptions of the demands of METTE programs; (b) a systematic approach to documenting student behaviors and program demands that put first-year students at risk for not completing classes and the effect of a specific set of interventions on the persistence of students who have received an early alert.

At Moraine Park Technical College (West Bend), the METTE research and innovation team is examining the effects of different career aptitude and placement assessments on student progress and success in the METTE programs. Faculty are interested in both: developing strategies for tracking student participation in internships and other work-based learning activities, and finding useful data collection tools and analytics that could document the association between work-based learning and student success.

At Milwaukee Area Technical College, METTE teams are integrating and contextualizing math concepts and skills. In order to prepare students who fall under the math cutoff scores for full admission, leaders of manufacturing programs are implementing two innovative practices : The first practice is a new one-credit course that contextualizes math learning using examples from manufacturing to support Associate Degree students who are in the prepared-learner level math course. This 1-credit elective course includes practical mathematics examples provided by several MATC welding, mechanics, and engineering technology faculty members. The second initiative is a program specific math course with support from adult basic education (ABE) and hands-on learning, such as blueprint and shop courses, for diploma students. During the upcoming academic year, the METTE Research Group, assisted by several graduate students, will design valid and reliable survey instruments, and interview protocols (individual, focus-group) to try to gather additional data and themes that will make the quantitative analyses valuable in understanding how this experience shapes student learning, achievement, and engagement.

Todd Lundberg led a discussion of different ways to use qualitative information from interviews and focus groups as part of the NIC projects described above. A resource and discussion guide for the LLTs was distributed and informed the team discussions. Throughout the coming academic years, the LLTs and NIC teams are encouraged to consider strengthening their data collection efforts and findings with the use of qualitative information and data.

Recent policy priorities, along with new efforts to address the manufacturing skills gap and the institutional performance of the WTCS campuses, were presented and discussed. Numerous opportunities exist for METTE collaboration through research and evaluation studies and systematic implementation of innovations with the WI Covenant Foundation's Workplace Partnership grants and the US Department of Labor TAA-CCCT grants (Making the Future and AMP Plus). Jim Mackey and Leah Childress, WTCS consultants, described the new state requirements for a WTCS performance funding scheme to be designed this year. Details are available at [http://www.wtcsystem.edu/legislative/state/pdf/performance\\_accountability.pdf](http://www.wtcsystem.edu/legislative/state/pdf/performance_accountability.pdf) Some of the proposed nine indicators for judging institutional or program performance and substantial overlap with the METTE student success outcomes. Dr. Phelps noted the absence of robust, value-added indicators to guide the decisions of and planning by individuals seeking technical degrees and credentials.

Ben Dobner, Director of the Wisconsin Covenant Foundation's Workplace Partnership Program, provided some preliminary findings from the advanced manufacturing projects underway at five WTCS campuses. To date, 108 students have been served and about half have been hired in manufacturing positions. The most successful programs and those in which industry leaders approach the college, career ladder options are provided, and students with multiple education and learning needs are supported intensively.

The METTE WCER Research Team will be conducting a conference call briefing in early September for leaders of the WI TAA-CCCT Consortium project - Making the Future. We will update them on some of the emerging findings, the NIC Projects at each campus, and the METTE Student Success Model.

Dr. Brad Carl, our External Evaluator, reviewed the Year 2 formative evaluation findings, which he prepared in June for the annual progress report to NSF. Additionally, he led a discussion on the possibility of using institutional impact metrics as part of the Year 3 and 4 evaluation activities. EDUCAUSE's Analytics Maturity Index was presented as a potential tool. The participants recommended that consideration be given to an instrument used at several WTCS campuses recently. PACE (Personal Assessment of the College Environment) is available through the National Initiative for Leadership and Institutional Effectiveness at NCSU.

Several observations and comments from members of the METTE Project Advisory Panel were offered to close the retreat. Dr. Van Noy noted the importance across the U.S. of understanding the implementation challenges and effects on student outcomes of "intentionally" designed programs (e.g., student cohorts with prescriptive patterns of courses and workplace learning and/or employment requirements for particular certifications). Jim Mackey from WTCS identified several NIC project innovations as having statewide importance, if they are deemed effective. He also commented on the wide positive interest in the student attrition study. Dr. Bragg offered several compliments about the unique and useful relationship between university researchers and technical college leaders and instructors. Steve Wendel from the National Center for Manufacturing Education said METTE teams were doing well in several respects; refining but not re-inventing the wheels of the METTE engine, but also stopping to think about whether or not wheels are needed. Attending her final advisory committee meeting, Dr. Barb Anderegg (Madison Area Technical College) commented on the national model for research and innovation in two-year colleges that METTE embodies.

The closing summary discussion focused on how METTE is seeking broader impact through dissemination:

Four METTE project leaders will participate in the ATE Principal Investigator's Meeting in Washington, DC on October 23-25. Two presentations will be made at this gathering of the NSF-ATE community.

Janet Washbon and Chris Mathney (FVTC) will present the Attrition Study and an analysis of labor market returns for METTE students at the STEM TECH Conference in Atlanta on October 27-30.

Three METTE research studies were submitted for presentation at the 2014 American Educational Research Association conference.

One or more presentation proposals will be submitted for the WTCS C3 Conference to be held February 6-7, 2014 in Wausau.

Finally, the METTE meeting schedule for 2013-14 was confirmed:

Late October:	Half-day web-conference for LLT members
January 9-10:	Winter Retreat at MPTC (1-1.5 days)
August 7-8:	Summer Retreat at FVTC

August 15-16, 2013

Host: Milwaukee Area Technical College, Milwaukee, WI

Theme: Launching the METTE Evidence-Based Innovations

### **GOALS AND OUTCOMES**

1. Share and comment on *final project implementation and evaluation strategies* for NIC projects
2. Review plans for additional METTE-wide data collection
  - a. Qualitative data collection – capturing and using student perspectives
  - b. Analytics Maturity Index – assessing institutional data capacity
  - c. Supplementary resources: Evidence syntheses and case studies
3. Review broadening impact strategies
  - a. Updates and suggestions on: national conference presentations (including ATE PI Conference), state meetings, and state conferences
  - b. Updated project website—refine and roll-out plans
4. Share perspectives on future METTE work
  - a. Project external evaluation findings and insights
  - b. Project advisory board reflections.

### **Networked Improvement Community Projects -**

**FVTC** –Building relationships with high schools and high school recruitment partnerships;

- Teachers from five area high schools attended a summer institute to increase comfort and technical knowledge associated with their roles as adjunct instructors for the FVTC machine tool program.
- Parents and students will attend an orientation to understand the implication of dual credits for students.
- Currently building research tools for understanding what happens with high school students who have a greater number of transcribed credits going into college.

**WCTC** - Improving retention and first year engagement and retention for METTE programs

- Created two interventions: 1) new student orientation targeted to engineering program, 2) formal early alert system rolling out in fall.

- Students will be surveyed to try to understand student success factors and to gauge student attrition.

**MPTC – Improving student outcomes in manufacturing programs**

- Move from Accuplacer to TABE as well as mechanical aptitude and spatial relations (Differential Aptitude Test - DAT) to determine if there is a correlation between scores on these and program success.
- Qualitative analyses between findings from test scores and past experiences (using essay format, etc.) will be performed.
- Partner with business and industry in the area for field trips and possible internships.

**MATC** - METTE programs have associate and diploma programs. Math courses must be contextualized to accommodate both of these types of students.

- Targeting students in METTE programs with a METTE-specific math course written and taught by METTE faculty with practical examples from welding, mechanics, engineering. The course is a one credit elective.
- See a lot of important factors but are choosing to hone in on mathematics to raise abilities of students in these programs.
- Evaluation strategies - Want to design valid and reliable survey instruments, and interview protocols (individual, focus-group) to try to gather additional data beyond the quantitative analyses.

**For the METTE Project overall, we want to introduce qualitative perspectives for data collection and analysis.**

- Recruit NICs to refine protocols for surveys, interviews and focus groups
- Recruit NICs to help identify particular students (purposeful sampling)
- Work with campuses to run focus groups and conduct interviews

**Aligning METTE with other projects:**

- A. WTCS State Performance Funding Plans – discussion of 9 performance areas.  
“Performance Counts”  
[http://www.wtcsystem.edu/legislative/state/pdf/performance\\_accountability.pdf](http://www.wtcsystem.edu/legislative/state/pdf/performance_accountability.pdf)
- B. Technical Skill Assessment/Attainment (TSA)
- C. College Access and Success Programming – Wisconsin Covenant Foundation Grant/Wisconsin Workforce Partnership Grant
- D. TAA CCCT Department of Labor Grant – “Making the Future”

**METTE Research Briefs, Implications for NIC Projects**

Reports given by Phelps, X. Wang and Washbon  
What else can/should we be doing to support NICs?

**External Evaluation Report**

- a. Summary of progress to date - individual NIC projects are impressive and are valuable to others doing similar work. There is broad buy-in.
- b. Provide forum for stakeholders - Translating research into program improvement and policy remains a challenge.
- c. Sustainability - Want to make sure work continues beyond grant.

**UPCOMING METTE PROJECT EVENTS:**

**Next retreat dates** – January 9-10, 2014 at MPTC West Bend campus (1 day or 1.5 day); August 7-8, 2014 (FVTC).

**Upcoming meetings**

WTC Institutional Research Committee Meeting - October 2-3 in Wausau WI at NTC

C3 Meeting – February 6-7, 2014. Call for presentations closes Sept 30. Website set up for it – reservations and proposals taken electronically -  
<http://www.wtcsystem.edu/c3/>

PI conference – third week in October 23-25, 2013.

Representatives from METTE will present about jobbing out and wage reporting at STEMtech – October 27-30, 2013.

Proposals submitted to AERA 2014, April 3-7, 2014. Pending approval.

