

Notes of the Expert Panel Meeting Representing Higher Education April 19, 2018

National Assessment Governing Board *Ad Hoc* Committee on Measures of Postsecondary Preparedness

As one step in addressing the charge of the *Ad Hoc* Committee on Measures of Postsecondary Preparedness, HumRRO organized and facilitated a meeting with a select group of higher education innovators. The purpose of this meeting was to elicit input from leaders and experts in higher education about (a) the jobs that will exist in 2030, (b) the skills that these jobs will require, and (c) the measures/indicators that would be needed to determine the status of elementary and secondary students with respect to these skills.

We were fortunate to assemble an exceptional panel of experts and leaders. The panel members included **Dr. Sarah DeMark**, Vice President of Academic Programs, Western Governors University; **Dr. Pradeep Kotamraju**, Bureau Chief, Career and Technical Education, Division of Community Colleges and Workforce Preparation, Iowa Department of Education; **Mr. Michael Morsches**, Dean of Learning Enrichment and College Readiness, Moraine Valley Community College; **Dr. Yvette Mozie-Ross**, Vice Provost for Enrollment Management and Planning, University of Maryland, Baltimore County; and **Dr. Holly Zanville**, Senior Advisor for Credentialing and Workforce Development, Lumina Foundation. Also, in attendance were some Governing Board members, Governing Board staff members, and HumRRO staff, listed in Appendix A.

The meeting was held on April 19, 2018 in Chicago, Illinois. An overview of the National Assessment Governing Board and the charge of the *Ad Hoc* Committee on Measures of Postsecondary Preparedness, along with the agenda and logistical information for the meeting were sent to the panelists in advance of the meeting.

Thanos Patelis (HumRRO) opened the meeting and after quickly informing the group of some logistics, Terry Mazany, *Ad Hoc* Committee Chair, set the stage for the role of NAEP in the future, given the impact of technology on work as well as the economic and global context in which students enter the post-secondary world. He led the attendees through introductions. Thanos Patelis facilitated the meeting around the three areas of inquiry involving (a) the jobs of 2030, (b) the skills these jobs will require, and (c) the measures/indicators needed to measure these skills. Finally, Terry Mazany offered some concluding comments. The agenda and the list of all attendees is in Appendix A.

The purpose of this document is to summarize the themes and comments made by the panelists. The information in this report is meant to provide insight into the rich conversation and comments provided by the expert panelists.

The Future of the Workplace and Work

With experts representing higher education, the discussion of the future of the workplace and work focused on pathways to work, primarily through postsecondary education and training.

- Postsecondary institutions need to create pathways to develop agile employees who are open to lifelong learning.
- Lifetime or continuous learning will become the norm. Employees will need to continue to learn from different providers, from colleges/universities to specific training courses to experiential opportunities, throughout their lives. Information technology (IT) workers already face this with a variety of certifications for specific technology tools and applications. Highly-regulated occupations will likely be the last ones to make changes.
- Postsecondary institutions need to partner with employers to identify education and training needs so that graduates possess the knowledge and skills needed for jobs.
 - Look to IT which is leading the way in defining job requirements and credentials for employees.
 - One of the panelists described a keynote presentation by the CEO from Chegg, Dan Rosensweig, describing the current disconnect between expectations and responsibilities of employers, higher education, and students. He illustrated this by placing each of the stakeholders at the vertices of a triangle with arrows facing outward indicating a lack of working together rather than arrows pointing inward, toward each other, signaling collaborative planning and working together toward similar goals.
 - Educators can be resistant to business models.
- There are still barriers to postsecondary education. Although community colleges have an open policy (in some states students do not need a high school diploma to enroll in community college), students may find it difficult to pursue their desired major or to matriculate. Prerequisites and competitive admission in selected programs (e.g., healthcare) are barriers to entry.
 - Similarly, some 4-year colleges guarantee admission to those with associate's degrees, but cannot guarantee admission into specific programs due to enrollment capacity and accreditation requirements such as completion of specific coursework.
 - Some community college graduates are not prepared for 4-year colleges and universities because their 2-year institutions have limited qualification requirements for instructors and low standards for their graduates. Both of these factors could be a barrier to continued education.
- More individualization in postsecondary education requires "policy by anomaly."
 - In developmental education, need to identify what students need and how to get it to them. Placing students on paths matching their goals raises retention rates.
- Strong partnerships are needed between 2- and 4-year institutions of higher education to facilitate students' transfer between schools.
 - High school graduation projections show Hispanics are the fastest growing group³⁷ and many of this group begin their postsecondary studies in community college.
 - Many students are graduating from high school with associate's degrees obtained through early middle college programs and dual enrollment.
- Colleges and universities must provide different, perhaps individualized, services to students who enter at different points on the pathway to a 4-year degree. Historically, 18-year-old high school graduates enter as freshmen with new-student services and support structure

³⁷ See Bransberger, P., & Michelau, D. R. (2016). *Knocking at the college door: Executive summary*. Boulder, CO: Western Interstate Commission for Higher Education.

for the first year or two. Institutions are now called on to help a select group of high school graduates entering college with associate's degrees, yet perhaps still needing wraparound services due to their youth (compared to the services offered to 20-year-old or older students transferring to a 4-year program with an associate's degree). Other students may start and stop their education multiple times and attend several institutions before graduating.

- To prepare students for future jobs, we need vertical and horizontal articulation. For horizontal articulation, students need technical, academic, and employability skills (e.g., grit, self-understanding). For vertical articulation, the key is determining at what age/grade to start. High school staff say it needs to start in middle school; middle school staff say it needs to start in elementary school.
- Need a mechanism to validate training and experience as part of the pathway to a degree. More and more high school graduates are already working through the gig economy. Other students have jobs and families while attending college.
 - Look to the military; they validate training as credits.
 - Western Governors University (WGU) provides micro-credentials or badges as students achieve milestones to show them the skills and knowledge attained as they work toward their bachelor's degree.
 - Give students the ability to curate their work and educational experiences.
- There is tension between an integrated approach providing a broad range of skills (academic, technical, and employment-oriented) and the business need for a narrow, specific set of skills to meet a skill shortage. One is too esoteric, the other too pragmatic.
- Post-secondary institutions will not be the destination, but a vehicle for certifying student competencies.
- Expect the acquisition and use for knowledge and skills to flip. Currently, knowledge is the base foundation provided by formal education and we obtain skills as needed. In the future, skills will be the base and we will obtain knowledge as needed.

Skills Needed in the Future

- Don't teach students to do what a robot can do better.
 - Robots are better than humans at pattern recognition, repetitive tasks, etc. but they are not able to understand nuance of language, social relationships, or creativity.
 - It will be important for humans to connect domains.
 - McKinsey has developed a list of human skills such as empathy, planning, creativity, common sense, sense making, novel thinking, nuance of language, social relationships, etc.³⁸
- In addition to content or professional knowledge, students need:
 - practical transition skills
 - key learning skills and cognitive strategies
 - strong foundation of self-understanding and engagement strategies
 - critical thinking
 - affective mindset and skills
 - meta learning
 - financial literacy
 - information technology literacy
 - health and wellness literacy.

³⁸ See Chui, M., Manyika, J., & Miremadi, M. (2016). *Where machines could replace humans—and where they can't (yet)*. McKinsey Global Institute. <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet>

- Schools can provide learning and workplace skills.
 - College experience courses for high school students.
 - WGU offers eight synchronous online sessions with a small, facilitated cohort on skills such as self-efficacy, communication, and learning styles. In a pilot test with at-risk students, there were significant positive outcomes: performance in courses as well as retention increased. Some of the skills, including leadership and communication, were identified by the medical profession as ones missing in graduates. These skills not only make graduates better job candidates but also more resilient students.
- Consider where or why skills are needed to build awareness of how skills fit into work.
- Four-year institutions look for grit or persistence as a necessary skill for student success. Students with a solid academic foundation and grit should be able to succeed, whereas students with a strong foundation of academic knowledge and no grit may not be able to handle the rigor of college.
- Class attendance is the best predictor of success, as evidenced both by anecdote and research. Some colleges require attendance and initiate interventions if students do not attend class.
 - There is a question of how to measure attendance for online courses. One approach is to look at student engagement using interaction data from Learning Management Systems (LMS).
- Students need to learn how to get “unstuck” when in a challenging situation.
- Employers are looking for people who can work across left and right brains and are able to work with technology.

Measures of Skills in the Future

- Employers offer performance-based pay for high-value, high-priority credentials supporting ability to use skills.
 - Students may demonstrate their skills through portfolios.
 - Use blockchain³⁹ to document achievements and portfolio.
- Need new types of student assessment.
 - Current assessments focus too much on knowledge and not enough on skills, character, and meta learning.
 - Students take most current assessments working alone rather than in teams. Need authentic assessments of team work with hands-on performance components.
- Leading-edge assessments use simulation and are more applied, with problem solving scenarios that assess whether you can use knowledge.
- Create dashboards for parents and students to see skill attainment, including credentials.
- Use micro credentials and then stack those credentials to meet employer-relevant needs.
- There is a tension between broad versus specific measurement of skills.
- Include all stakeholders in identifying what and how to measure skills.
- Measuring college or postsecondary readiness is different than college or postsecondary success.
- Some postsecondary institutions use transcripts, others don't.
 - Transcripts could provide an opportunity to leverage high school data for postsecondary instructors to know what students have done prior to college and to personalize postsecondary instruction.

³⁹ For information about blockchain: <https://hbr.org/2017/01/the-truth-about-blockchain>

- Expect seat time to be a less helpful measure from an industry perspective. They will be interested in a “transcript” with learning opportunities, perhaps using blockchain technology.
- For transcripts to be useful to instructors, need a way to standardize them.
- Need to include attendance on transcript.
- Metrics of academic rigor exist with validity evidence provided to support their value in predicting college outcomes.
- Concern with the shelf life of measures such as SAT or ACT, course grades, etc. Are high school results as valid for older, returning students?
- Metrics should include student employment.
- Measures of service learning are needed.

Reflections

Terry Mazany offered four reflections on the discussion:

1. We need to project all of the allied trends in society to 2030. Work is shifting to a gig economy. This will be the reality for 16- to 18-year-olds in 2030. We need to factor the expected changes in the economy of 2030 into the skills required to work in the future. Data is the new oil. Micro-credentialing and digital badges will more and more populate transcripts and portfolios.
2. There will be several paradigm shifts: (a) knowledge/skill flip, (b) everything has a developmental progression except technology, (c) the nontraditional student of today will be the traditional student of tomorrow, (d) students will be agents for themselves, and (e) a world where trust is collapsing in every venture except nonprofit ventures – blockchain as a key to build this trust.
3. We are in-between systems. We need to maintain an ecological perspective of each part of the system and look at the reciprocal changing role of employers.
4. The role of NAEP: We need to align NAEP with the requirements of Every Student Succeeds Act (ESSA), such as conditions of learning. This might be done by back-mapping the requirements of ESSA with what NAEP provides.

Appendix A: Meeting Agenda and Attendees
Expert Panel Meeting
National Assessment Governing Board
Ad Hoc Committee on Measures of Postsecondary Preparedness

April 19, 2018 | Agenda

11:00 to 11:05 AM **Start Meeting**
Thanos Patelis, Facilitator, HumRRO

11:05 to 11:15 AM **Welcome and Introductions**
Terry Mazany, National Assessment Governing Board Member
Chair, Ad Hoc Committee on Measures of Postsecondary
Preparedness

11:15 AM to 12:00 PM **Work of the Future**
Thanos Patelis

Guiding Questions:

- *What do you see as the postsecondary pathways that high school seniors graduating in 2030 will be choosing among? (11:15-11:40)*
- *Compared to now, what kind of trends do you see shaping postsecondary education in 2030? (11:40-12:00)*

12:00 to 12:15 PM **Break to get lunch**

12:15 to 1:00 PM **Skills for the Work of the Future**
Thanos Patelis

Guiding Questions:

- *How have postsecondary entrance expectations changed in recent years? (12:15-12:40)*
- *What types of competencies and content knowledge will graduating high school seniors need to be prepared for postsecondary pathways in 2030? (12:40-1:00)*

1:00 to 1:45 PM **Measures of these Skills**
Thanos Patelis

Guiding Questions:

- *What measures do you see being used for these competencies?; What will require new or updated measurement tools? (1:00-1:20)*
- *What metrics would provide helpful information in the aggregate about the competencies of graduating high school seniors? (1:20-1:45)*

1:45 to 2:00 PM **Final thoughts and concluding remarks**
Terry Mazany

Attendees

Expert Panelists:

- Sarah DeMark, Vice President of Academic Programs, Western Governors University
- Pradeep Kotamraju, Bureau Chief, Career and Technical Education, Iowa Department of Education
- Michael Morsches, Dean of Learning Enrichment and College Readiness, Moraine Valley Community College
- Yvette Mozie-Ross, Vice Provost for Enrollment Management and Planning, University of Maryland, Baltimore County
- Holly Zanville, Senior Advisor for Credentialing and Workforce Development, Lumina Foundation

Governing Board Members:

- Terry Mazany, Chair, Ad Hoc Committee on Measures of Postsecondary Preparedness
- Dale Nowlin, Teacher and Mathematics Department Chair, Bartholomew Consolidated School Corporation, Columbus, Indiana
- Alice Peisch, Legislator, Massachusetts House of Representatives, Wellesley, Massachusetts
- Chasidy White, Director of Strategic Initiatives, Office of the Superintendent, Montgomery, Alabama

Governing Board Staff Members:

- Bill Bushaw, Executive Director
- Lisa Stooksberry, Deputy Executive Director
- Lily Clark, Assistant Director for Policy & Research

HumRRO Staff Members:

- Monica Gribben, Senior Staff Scientist
- Sunny Becker, Principal Staff Scientist
- Thanos Patelis, Principal Scientist

Expert Panelists

Sarah DeMark, Ph.D.

Vice President of Academic Programs
Western Governors University



Sarah DeMark joined nonprofit Western Governors University (WGU) in September 2014, and serves as the Vice President of Academic Programs, responsible for leading WGU's portfolio strategy as well as the design and development of the university's competency-based degrees, curriculum and assessments. This portfolio includes more than 50 programs, 600 courses, and nearly 1000 assessments.

Prior to joining WGU, DeMark spent more than 15 years at leading IT companies, serving in various leadership roles where she oversaw the strategy and execution of the design, development, and deployment of certification and curriculum-based assessment portfolios. Previously, she was an independent consultant working with state and local school districts, as well as working with The College Board on SAT and AP program evaluation.

DeMark is published in numerous journals and books and is a sought-after speaker. DeMark currently sits on ANSI's Personnel Certification Accreditation Committee, which serves to validate whether certification programs adhere to standards.

DeMark earned a Ph.D. in Educational Psychology (Measurement, Statistics, & Methodological Studies) from Arizona State University. DeMark earned B.S. degrees in both Elementary Education and Psychology from Vanderbilt University.

Pradeep Kotamraju, Ph.D.

Bureau Chief, Career and Technical Education
Division of Community Colleges and Workforce Preparation
Iowa Department of Education



Dr. Pradeep Kotamraju is currently the Bureau Chief, Career and Technical Education, Division of Community Colleges, Iowa Department of Education. As Iowa's State Director for Career and Technical Education (CTE), he has leadership responsibility in managing those secondary and community college CTE programs that are funded through the Carl D. Perkins federal program. Previous to his current position as the Iowa CTE State Director, Dr. Pradeep Kotamraju has served the Deputy Director, National Research Center for Career and Technical Education (NRCCTE), University of Louisville, Louisville, Kentucky. Prior to that, he served as the System Director, Perkins, at the Minnesota State Colleges and Universities, Office of the Chancellor. Dr. Kotamraju has worked in several senior administrative positions in higher education and workforce development agencies in Minnesota.

Dr. Kotamraju has written several publications and monographs, and made numerous presentations, in the area of student success in career and technical education, workforce development in the United

States, and, in the area of economic progress in the developing world. His research has included the examination of a variety of labor market information and workforce development issues that connect occupations, skills and careers, as individuals transitioned back and forth between employment and education. Dr. Kotamraju has been invited to participate on several statewide, regional and national committees that have focused on CTE programs, budget and finance, and accountability. Some of these committees have had even broader focus that places CTE right front and center when it comes to connecting education, workforce development, and economic development.

Before working in the public sector, Dr. Kotamraju taught college- and university-level Economics and Statistics at several higher education institutions in Minnesota and Kentucky. Dr. Kotamraju holds a Ph.D. in Economics from the University of Illinois. He received his Masters Degree in Economics from George Washington University, and his Bachelors in Economics from the University of Delhi, India

Michael Morsches

Dean of Learning Enrichment and College Readiness
Moraine Valley Community College



Michael Morsches has worked in higher education for more than thirty years. His primary focus has been on developmental education and the transition from high school to college.

Michael currently serves as the Dean of Learning Enrichment and College Readiness at Moraine Valley Community College. He oversees the ABE/GED, ESL, developmental education, literacy volunteers, and tutoring programs. Michael has published numerous articles and handbooks on retention, student engagement, and teacher training in post-secondary institutions.

Yvette Mozie-Ross, Ph.D.

Vice Provost for Enrollment Management and Planning
University of Maryland, Baltimore County



Yvette Mozie-Ross, PhD, is Vice Provost for Enrollment Management and Planning at the University of Maryland, Baltimore County (UMBC). As Vice Provost, Dr. Mozie-Ross provides oversight and strategic planning for the areas of undergraduate admissions and orientation, financial aid and scholarships, academic and pre-professional advising, records and registration, and the student administration project (student information system). With a higher education career spanning over 25 years, she has served in numerous professional capacities including residence community director, coordinator of multicultural recruitment, assistant director for transfer recruitment and admissions, director of undergraduate admissions, and director of academic services (advising and registration). Dr. Mozie-Ross has served on various national and statewide committees and workgroups including the College Boards' Commission for Transfer Policy and Practice, and the Maryland Higher Education

Commission's State Plan Writing Group on Access, Affordability and Completion. She has served on the university's Strategic Planning Steering Committee and is currently serving as a member of the governing board for the Baltimore Collegetown Network, a consortium of 13 colleges in Baltimore, Maryland. Dr. Mozie-Ross frequently lends her expertise, both nationally and internationally, in the area of data analytics and leveraging analytics for institutional transformation. Dr. Mozie-Ross earned her bachelor's degree from UMBC in 1988, her master's degree from University of Maryland University College in 1994, and her doctorate in Education Policy and Leadership at the University of Maryland, College Park in 2011. Her dissertation research examined the academic and background characteristics of high school graduates who identified teachers as influential in their choice of college. Dr. Mozie-Ross enjoys spending time with her husband of 22 years and their 20-year old son. Her pass-time interests include family genealogical research and running.

Holly Zanville, Ph.D.

Senior Advisor for Credentialing and Workforce Development
at Lumina Foundation



Holly Zanville is Senior Advisor for Credentialing and Workforce Development at Lumina Foundation. She leads a new portfolio on Worker and Employer Engagement that focuses on building the capacity of educators and employers to scale and spread the best ideas in training, credentialing, and other workforce development strategies linked to postsecondary learning opportunities; and examining issues around the future of work and learning. Her work includes cultivation of networks and partnerships essential to the emerging new postsecondary learning system including Credential Engine, quality assurance efforts to ensure that credentials stand for high-quality learning, and networks for research and industry sector engagement. She previously led Lumina's development of the national Connecting Credentials initiative, credential completion for returning adults with prior college/no credential, and statewide approaches to reverse-transfer degrees through the Credit When It's Due initiative. Zanville received her Ph.D. in Educational Administration

from the University of Minnesota; MA in English from the University of Wisconsin-Madison, and BA in English and Biology from Lindenwood University.