

Minutes
Math and Science Advisory Council Meeting
Friday, November 19, 2010
Gold Building Room #108
New Mexico Tech

Attending

Council Members and Alternates: Tomas Atencio-Pacheco, Toney Begay, Mary Jo Daniel, Franny Dever, Len Duda, Lisa Durkin, Bob Eisenstein, Ashley Ivins, Joyce Kaser, Cathy Kinzer, Ellen Levy, Raymond Nance, Richard Nygren, Ted Stanford, Kristin Umland, Kathryn Watkins

MSB Members: Claudia Ahlstrom, Pascal Buser, Melissa Lomax

Guests: Wanda Bulger-Tamez, Anne Madsen, Sheryl White

Minutes: Ellen Levy with contributions from Tomas Atencio-Pacheco, Mary Jo Daniel, Franny Dever, Bob Eisenstein, Joyce Kaser, Richard Nygren, Kristin Umland

Clarifying the Roles of Council Members and Alternates

The meeting norms were reviewed. Discussion resulted in a rewording similar to “members who know they will be late are requested to contact the Chair. If they inform the Chair, an alternate will sit in for them until they arrive; otherwise an alternate will sit in for them for the day.” Furthermore, it was also suggested that members notify the council chair for an excused absence and allow for a smooth transition for an alternate to be named. The revised statements will be sent to MSAC members for their review.

September 17, 2010 minutes were reviewed, discussed, and approved.

Formal recognition of Dr. Lorenzo Gonzales was postponed until he could attend.

Suggestions regarding future correspondence to Secretary of Education and the public were discussed. Scheduling a personal meeting with the Secretary of Education is a priority. Discussion continued for the development of two different documents.

Suggestions for Document 1:

- Correspondence to the Secretary of Education should include the names of council members to indicate the representation of the council from around the state.
- Correspondence should be reviewed by a small cohort and completed in a timely manner. (Members volunteering to review a letter quickly prior to it being sent to the Secretary were Tomas, Len, Bob, Mary Jo, and Claudia.)
- Correspondence to the Secretary of Education should precede the public digest.

Suggestions for Document 2:

- Develop a public digest to raise awareness and visibility of this council and its work.
- The public digest should be reviewed by a small cohort and distributed after receiving feedback from the correspondence sent to the Secretary of Education.
- The public digest “summary” should be no longer than one page use bullets to improve readability.
- The Deputy should be contacted to determine protocol for posting on list serve.

Draft 2010 Math Science Advisory Council Public Elementary and Secondary Mathematics and Science Student Achievement Annual Report to the Secretary of Education Reviewed

- Change the title to 2009-2010 with the MSAC members' names for 2009-2010 and 2010-2011.
- Let's "trumpet" the Algebra 1 increase in grade 8 students.
- Accessing accurate data and how that data is shared is a concern across the state.
- Plot the data by the year so that visually the graphs do not "dip" as presently indicated but visually graph the increases.
- Edits, feedback, and bulleted occurrences from last year need to be sent to Pascal by 11/23.

A Conversation with Governor-Elect Susana Martinez's Transition Team Representative

Dr. Van Romero, NM TECH was given New Mexico Project 2012-Transformative Change of K-12 Education created by the MSAC. He shared information regarding the development of possible Math Boot Camps for anyone including the unemployed, students, and teachers. The Math Boot Camps sessions would look different to meet the needs of the various groups from basic math to trigonometry. Session would be offered at different times of the year and of varying time lengths. The duration of the funding for Math Boot Camps would be for 5 years. Thus, support could be provided through the year for people needing assistance and available for Northern New Mexico.

The Governor-elect's transition team is looking into who will be the science advisor.

Professional Development discussion with Dr. Romero

- A plethora of professional development exists. MSAC members suggested that what is needed is a comprehensive shared vision consisting of efficient and good coordination of existing professional development activities. This should increase program impact within the state. Currently, the EPSCOR database is available.
- MC² goal is to increase teacher content and pedagogical knowledge. Mathematically Connected Communities addresses the various recommendations from New Mexico Project 2012. District leaders assist in developing a one or two week academy. Field and math coaches working with school math coaches, teachers, and principals develop an implementation plan. MC² has created a learning system to work with districts in determining "what is important, what are the significant challenges, what changes and direction will make a difference, and how to use the data in order to make informed decisions."
- MSAC members put forth that as resources continue to be a challenge a need exists to discuss what will be the next steps to be taken collaboratively and not in isolation.

Presentation from NM Tech on Alternative Licensure/MST Program by George Becker

Unique in the state, the alternative licensure program at NM Tech is open to students who are completing or have completed a degree in some content field. The program emphasizes building community in the classroom, collaborative learning and inquiry based instruction.

The MST program offers content-based graduate education in math, science, and technology to educators with at least one year teaching experience and a valid teaching certificate. It emphasizes hands-on classes and includes laboratory and field research and requires course work in biology, chemistry, computer science, geology, math, and physics. Currently, there are 150 teachers active in the program, which takes 3.5 years to complete, usually graduating 15-20

students annually. Seventy-five campus-based MST courses are offered with 45 MST courses offered over distance learning. \$600,000 in scholarships of free tuition and meals included are awarded each year.

Update from the Math and Science Bureau

- The Bureau is going ahead with the development of a financial literacy mathematics course which will be offered online. It was emphasized that the course will be aligned in rigor to an Algebra 1 course.
- Implementation of Common Core Standards has been postponed to July 2012.
- Again, discussion continued that NMPED does not have a science specialist in the Math and Science Bureau. With consideration that no one is reviewing the science assessments at this time, MSAC members volunteered to assist in the review process. Additionally, the importance of a science specialist is needed particularly in light of science instructional materials adoption in 2010-2011. Furthermore, as the next generation science standards continue to be developed with a consortium working on building common core assessments the import of a science specialist is evident. MSAC members who volunteered to review state assessments were Bob, Ashley, Kathryn, and Ray.
- Math and Science Day at Legislature is scheduled for March 11 in the Capital Building. Registration for a booth will be sent out. A speaker has not been chosen to date.

Small Group Report on EPSS Taskforce

Tomas Atencio-Pacheco, Ray Nance

- Work continues on developing goals that can be used for schools in the state on their EPSS. Initial ideas from the group include:

Elementary sample goals:

1. Students will engage in an inquiry-based activity once a week.
2. Science lesson once a week
3. Integrate grade-level appropriate vocabulary into curriculum and word wall
4. Students will do a project that evaluates/demonstrates the role of science in society.
5. Teachers will integrate science into curriculum through thematic lessons

Middle/High sample goals:

1. Science teachers will do a lab once a week
2. Science teachers will be highly qualified to teach science
3. Science and math teachers will collaborate to analyze data in a thematic unit
4. Science teachers will use a project-based assessment at least once a year
5. Science department creating a document that shows the vertical alignment of standards in the curriculum
6. Science department will use short-cycle assessments to identify gaps in content knowledge and develop a plan to address them in conjunction with the administration.

They identified the following timeline

1. Need to find individuals to help us review and come up w/ goals December
2. January have a draft prepared and shared via Trish Wagner
3. Share out via list serves (Feb/March), share out at March MSAC meeting

Small Group Report Suggested Focus in Preparation for the Upcoming Legislative Session

Bob Eisenstein, Len Duda, Kristin Umland

- **NM 2012 v 2.0** Chapter 2. Expanding Professional Learning Opportunities for Math and Science K-12 Classroom Teachers (page 90)

Recommendation 2.2: Work with the NMLI to require all K-12 administrators who supervise math or science teachers to attend at least two days of professional learning per year focused on math or science education (this also dovetails with Recommendation 1.2(d): Enhance greatly, and make mandatory, a program of continuous professional learning for in-service K-12 teachers and administrators).

We should consider inviting Linda Paul to the next MSAC meeting. *[MSAC recommends that work begin as soon as possible to implement the recommendations of Senate Joint Memorial SJM3 (“Strong Leaders for New Mexico Schools,” 2008).]*

- **NM 2012 v 2.0** Chapter 3. Optimizing Instructional Strategies for K-12 Math and Science Education (page 91)
Recommendation 3.1(c): Use the existing STARS course titles statewide for high school math and science core courses to aid in student transfer, college admission, and data collection. ,
[MSAC recommends that in the 2010 legislative session legislation be introduced to improve the usefulness of the STARS system so that it can be used for good decision-making at the state as well as district and school level.] This will center on issues like standardizing course titles, including grade entry, and privacy protections as well as others.
- MSAC members jointly agreed that funding for summer professional development is key.

Small Group Report from Toney Begay, Richard Nygren, input from MaryJo and Claudia)

Letter to facilities authorities re: upgrading science labs to request status report

Central issue is who to contact rather than drafting a letter.

- MSB-PED cannot go directly to teachers, principals or even all superintendents
- Education administrators tend to balk at being by-passed
- We do not have a contact network for the state science teachers (we do have NMSTA, nmlistserve, ?etc.)

Considerations

- Learn sensitivities in trying to establish a network solely for use by MSAC, e.g., PED cannot use this but could maintain list on their website for MSAC access
- Use existing expertise, e.g., experienced people in MESA (Toney will ask), and ask NM Superintendents Ass. Staff in Santa Fe.

Approaches (not mutually exclusive)

1. Hierarchical – letter or e-mail to superintendents (cc: principals) explaining inquiry about labs and asking their help in getting the information
2. Regional – contact science coordinators in larger districts and principals in small districts and teachers in very small schools.
3. Teachers – pose query “how to approach this” on nmlistserve and with NMSTA

Plan and Timeline

Resolve approach: learn about sensitivities (a) within PED and (b) with superintendents and (c) suggestions from MESA
A&B [Nygren by Jan 31]; C [Begay by Dec 15]
Inform PED and Secretary about recommended plan
Send info
Collect results, report

Small Group Report Asset Mapping Initiatives

Mary Jo Daniel, Lisa Durkin, Ellen Levy

NM STEM Database, developed and maintained by NM EPSCoR, includes resources for K-12, undergraduate, and graduate level opportunities and events at www.nmstemed.org. Mary Jo requests the assistance of MSAC members to solicit more program postings; EPSCoR will be developing a "marketing" campaign to generate more use of the site once it is well-populated. Also, we need more information to better understand the list/web service being generated by Innovate Educate NM—the plan and its intended capabilities. Ed Spivak should also be invited to a later meeting to give an update on the wiki he has created.

Small Group Report Pre-service Teacher Preparation

Ted Stanford, Franny Dever

MSAC could bring together teachers who teach math for elementary teachers and the elementary math methods classes from various universities and colleges around the state. The goals would be two-fold:

1. Consciousness-raising related to NM Project 2012, the new teacher competencies in pipeline, the Common Core Standards, and the third course in the sequence that is new at many institutions
2. Making personal contact with someone from each institution so that we can establish more communication among this group that will extend into the future beyond the current issues.

In order to recruit these instructors we would invite them regionally to upcoming MSAC meetings in different parts of the state. Our next MSAC meeting is Friday, January 21, 2011 in Santa Fe. There we would need to invite someone from UNM Taos, Highland University, Northern NM Community College, Math Science Academy (?), College of Santa Fe, Other? Part of the afternoon at an MSAC meeting we'll be having working groups devoted to teacher preparation issues. We will invite the instructors to that part of the meeting. An agenda will be prepared for this working group of visitors.

Small Group Report from Recommendations to PED was delayed because we ran out of time. Our next meeting will begin with a report from them. Cathy Kinzer, Ashley Ivins

With Great Appreciation

A thank you to Cathy Kinzer for the wonderful refreshments. Also, thanks to LANL foundation for providing lunch today.

Next Meeting Friday, January 21, 2011, Santa Fe. Location to be determined.