

Math and Science Advisory Council
September 19, 2008
New Mexico Tech
10:00 am to 4:00 pm

In attendance: Ellen Levy, Len Duda, Kim Thomas, Cheryl Coyle, Cathy Kinzer, Lorenzo Gonzales, Tom Gruszka, Bob Eisenstein, Joyce Kaser, Brian Every, Ted Stanford, Claudia Ahlstrom, Rick Scott, Mary Jo Daniel (note-taker)

Visitors: Kathryn Watkins, Anne Madsen

Minutes from the last meeting were approved.

Bob Eisenstein reviewed and discussed the agenda for this meeting. The morning will be devoted to wrap-up discussion of NM Project 2012. He stated that once the Council approves the NM Project 2012 Summary and Appropriations Request they can be used by Math and Science Bureau (MSB) staff in discussions within PED and with other policy makers as official recommendations from MSAC. The afternoon agenda is focused on distance learning issues (Chapter 4).

NM Project 2012

For the discussion of the NM Project 2012 Summary and Appropriations Request, members split into small working (Chapter) groups. Upon reconvening, they reported to the whole group.

Chapter 1

Rec. 1.2(b)--delete "in creating this curricula"

Rec. 1.3--change "such as UTeach" to "from other states or countries"

There was some discussion about whether there needs to be language to address the concern for high school teachers as opposed to K-6.

Rick noted that HED is now requesting the \$1,279,500 in the NMAC Appropriations Request.

Rec 1.2(d)—refers to Chapter 2; does Chapter 2 define high quality professional learning adequately? Referred to 2.1(d)

Chapter 2

Rec 2.1(d)—change "strategy" to strategies

Rec 2.1(h)—important to say why we need to expand Masters Programs; relates to 2.1(g); add to the end "with a focus on preparing educators to be professional development providers and leaders."

"Expand" needs to be better defined, perhaps split into several recommendations. It should be revised to not address a few specific programs.

Claudia was tasked with revising this recommendation.

Appropriations Request

2.1(c)—change "and" to "or" in "math and science teachers"

2.1(f), 2nd bullet—change "inquiry" to "problem solving and inquiry-based"

Question: fellowships for teachers to work with pd providers has been taken out. Where did it go? It may have been omitted by mistake, so group will send it to Bob to put it back in.

Question: should we be consistent with K-12 or preK-12? There may be reasons for using the different designations. Decision: make all references to grades “K-12” because of questions of PreK status organizationally.

Chapter 3

Rec 3.2(a) last bullet: wording continues to be unclear.

Suggestion: “Revise the cost structure of the adoption process to make it more equitable and inclusive for vendors.”

Insert “Work with the Instructional Materials Bureau” at the start of the recommendation.

Rec 3.4, 5th bullet: change “implantation” to “implementation”

Rec 3.3— Suggestion: “Leverage community groups to create and manage science and math inquiry kit distribution centers” change “science kit” to “science and math kit” centers

Appropriations Request

Want to add an additional appropriation for small equipment such as graphing calculators and laboratory science (e.g., microscopes). The amount can be justified based on input from HS lab survey.

Comment: We need to be clear when using “students” if we mean K-12 or post secondary students.

Chapter 5

Rec 5.1(c)—“Create a NM student researchers consortium to provide an effective means to link interested students and teachers to research consultantships or mentorship with STEM professionals” (tentative wording)

Rec 5.2--change to “Investigate the feasibility of establishing...”

Chapter 7

Should we be looking for public funding for public awareness? We must get funding for this to be matched by corporate interests. The group suggests requesting \$60K—50% of first year estimate from DW Turner.

Motion: Vote to approve NM Project 2012 Summary and 2009 Legislative Appropriations Request, subject to revisions as discussed. All revisions will be sent to all Council members and everyone who is here today early next week.

Passed unanimously

Math and Science Report

Rick Scott asked the Council for advice on whether the entry level competency revisions should be delayed until any refinements of the science and math Standards are complete.

He asked, “Is it worth doing this task given that changing the competencies has had minimal impact on changing instruction at the post secondary institutions?”

Discussion:

The competencies for elementary license related to content (section J) should also be looked at.

Do we need to worry about the student standards as opposed to other professional resources about what a teacher needs to be a science or math teacher?

Motion made to table discussion to be returned to today after presentations. Upon return to this discussion the Council decided that the teacher competencies don’t need to be aligned with student standards so Rick should continue the process for revising the teacher entry level competencies.

Distance/eLearning

Tim Snyder, IDEAL-NM

IDEAL-NM had its grand opening on August 12; they have generated lots of interest throughout the state. There is no project anywhere in the US that matches NM’s in depth and breadth. IDEAL provides eLearning services to PK-12, higher ed and state agencies. Most courses are generally for high school; they are working on developing course content for high school and middle school. The legislative mandate is for grades 6-12; the PK-5 is mostly for professional development.

Current registration: 577 students from 42 districts, 2 charters and 2 privates in 69 courses. School districts pay \$200/per semester course except AP which are free. Pacing/scheduling is very flexible; courses are asynchronous.

They have a back log of applicants to teach the courses. Most IDEAL teachers are moonlighting; they are NM teachers in a public school district. A few are retired.

Home school students have to “flow through” their home district.

How are labs addressed in science courses? Virtual labs are used for lab components.

Can a parent opt a kid out of the selected curriculum of a district? They would need district permission unless family chooses to pay for it themselves.

Problems to date: a) getting schools to change processes to promote this as an option; b) initial engagement period (student must “engage” within first 3 days); and c) student procrastination. The site coordinator at each school is the person who gets the kid on line, monitors weekly progress report, acts as a liaison with IDEAL teachers and administrators. IDEAL has a student services coordinator to monitor student progress. Early research shows that there isn’t much difference in achievement between face to face and online.

Concern about how process standards are incorporated into math courses was expressed. IDEAL is still working on policy for dual credit.

Lorie Liebrock, Interim Education Director for NM Computing Applications Center

The primary motivation for NMCAC was to address the need for technology jobs in the state. There will be a system for getting high school students to enter research proposals. NMCAC will be taking over operation of Encanto from DoIT on Oct. 1.

Comments: There's a need for professional development for university faculty at non research universities to know how to integrate NMCAC capabilities into courses for higher ed students. NMCAC needs to find teachers to pilot pieces; they are not ready for a full-blown integration of all these components at the state level.

When asked about future needs and desires for the Center in 5 years:

A) HED and PED get coordinated so there is a good dual enrollment credit process for high quality, professionally-assessed courses across the state that will allow students to take courses at any institution for any course anywhere in the state.

B) A micro-gateway in every district in the state so students don't have to go to local community college but can be taking courses with integrated 3-d simulation, working on research projects relevant to their communities, and putting their student data into a database used for environmental modeling.

Meeting Closure

Plus

Very interactive and involved today

Food was good

Location

Working on fine points of NM Project 2012—getting to fruition

Concern: a few felt that the document is not revolutionary enough, lacks looking at the future. On the other hand, if we propose out-of-the-box thinking that we can't implement it gets us nowhere.

Delta

No internet

Not doing a math or science classroom example. Council should get back to that.

Presentation (IDEAL) didn't help some council members visualize what was actually happening.

It would have been more helpful to participate in the program for a short time.

General presentations on eLearning were good for an overview. Council now needs specifics and more detail.

Next Meeting: November 21 in the Socorro area (specific location TBD)