Notes from 1/14/11 NCCCS Developmental Math Redesign Meeting

Groundrules:

- Ask the hard questions.
- Share every idea – at meetings or later when they come to you.
- Be polite and professional.

Highlights of innovations and gaps mentioned during roundtable discussion:

- GTCC, a DEI college, is piloting modules – students test into developmental math, but not at a specific level (i.e., 060 or 070). Working on establishing multiple exit points. They expect students to complete more than one course in the semester. There are 13 modules; several competencies in each module; a course is 4 modules. Using Alex software that has artificial intelligence to adapt to what students need.

- Halifax is using learning communities (focus of its QEP) to link classes and put developmental math in the context of different programs, e.g., welding.

- Southwestern is emphasizing getting students to take the math they need at the beginning of the program, not waiting until they only need those credits to graduate.

- Southeastern is integrating math into technical programs; it's like a co-requisite.

- Colleges agree that fractions are the number one stumbling block, likely because students haven't been exposed to them in many years because it's taught early in school and then not revisited.

- Mitchell is teaching developmental math contextually. Students will retain what they find they useful. Also using learning communities (combining developmental math with ACA and English) and find they are most beneficial in reducing 'within semester 'dropouts. They are challenging to schedule, however.

- Central Carolina was teaching developmental math using a self-paced, mastery model until 2002 but found students were moving too slowly so they moved away from that. Now they are using Web Asign and pre-tests to keep students moving and focus on the content that students need.

- Robeson is adopting the Emporium Model using My Math Lab and creating pacing guides for students so they know where they should be each week.

- Pitt is also using developmental math/English learning communities and My Math Lab. Mastery is not the goal anymore – it's getting students the math they need to move on.

- A-B Tech is using hybrid classes for developmental. Using My Math Lab. Online day is Friday. Less than 80 contact hours with the online component.

- There was discussion about the need for multiple placement measures and for students to be better prepared for placement exams through review/refresher modules. Colleges discussed that students who register on the last day pose a problem – they don't have time to review/refresh. CVCC is using late start semesters for those students who register late. The courses start 2 to 3 weeks later and then each class is about 15 minutes longer.

- CPCC is giving priority registration for students with more credit hours. More colleges are establishing earlier financial aid deadlines and registration deadlines. They say students are 'catching on' and no waiting as long as they used to before registering for classes.

- One barrier is getting connected to the student who takes a placement test but never enrolls. These are students who are lost from the pipeline at the very beginning.

Setting the Course and Review of the Design Principles

The group discussed the fact that there are three pillars to developmental education:

1. **Curriculum content**
2. **How it's delivered (traditional, computer labs, learning communities, accelerated, online, etc.)**
3. **Student support: wrap around services so that students have greatest chance to succeed (registration, financial aid, teaching students how to be good students, etc.)**

The charge of this math task force is to focus on the first – redesigning Math 060, 070 and 080 curricula. Colleges will have discretion on how to *deliver* the redesigned content. And the CAO steering committee (as well as the SuccessNC Innovative Ideas committee) will work on how to create the administrative and supportive structures that students need to be successful. That said, this group can and should make recommendations on policies for consideration.

Questions and thoughts about the Design Principles:

- It's important for students to be able to communicate about math. If it's self-paced modules, how are students learning to communicate math? We need a creative idea to have students be able to communicate about math. Does this language mastery math need to be part of some tracks and not others?

- Will the redesigned curriculum be component skills-based or more problem-solving based? Both?

- Should modules build from simple to complex with topics threaded across modules or should modules be self-contained – e.g., all graphing content from simple to complex consolidated in one module is an example of a self-contained modules.

- Perhaps there may be a need to for mini-modules within modules that students need, or don't need, based on diagnostic testing. But too many 'tree branches' will be cumbersome for implementation and confusing.

- Math is about connections — how will be build connections between concepts? This is important for critical thinking, one of the design principles.

- It is important to understand we are not trying to teach all HS math all over again. We need to give students a set of skills that will get them where they are going – this is about looking forward not looking backwards at the competencies students didn't acquire before they arrive at the community college.

- What process or criteria will the Task Force use to know what math is required by programs? A potential barrier is that what's taught in gatekeeper math courses varies across NCCCS widely. Especially Math 140. Developmental math also feeds into science courses so that's important to keep in mind in terms of what students need to know as they move on.

- Generally, Math 080 and Math 070 have too much content right now.

- We may need multiple exit points for developmental math depending on what programs students are going into.

- If we're looking for a widely applicable context in which to teach math that applies to everyone, we could choose life skills/financial literacy (banking, loans, etc.)

- There was discussion of what exactly a module is. Don Ammons from Gaston College suggested an expanded definition from what's in the Design Principles: "Modules are discrete, relevant, non-redundant topics or units of study connected to specific competencies that provide multiple exit points and make conceptual connections to subsequent modules."

How the Task Force will carry out its work, timeline, etc.

Conference calls, face-to-face meetings will be on Fridays. Greensboro is ideal location when available. Will explore GoTo Meeting, etc. if the group would like. May also look at piggy-backing some meetings with NCMATCY and NCADE meetings to reduce travel costs.

Each college is receiving grant funds this semester to cover a one-course teaching load reduction and to cover faculty travel costs. These are grant funds that are not affected by the state travel restrictions due to the budget shortfall.

Timeline:

- Spring semester 2011: bulk of curricula redesign
- Summer 2011: finalize redesign
- Fall 2011: review and limited beta tests
- Spring 2012: selected pilots
- Summer 2012: final revisions and rollout
- Fall 2012: implementation across NCCCS

Communication Strategy/Faculty Engagement

- Representatives of the redesign will present about redesign at the March 2011 NCMATYC meeting and at upcoming spring regional NCADE meetings
- Communication and updates about redesign will go to the CC Instructional Officers list serve maintained by the System Office
- The Task Force will explore using social media
- The group will also consider how to use the faculty who were nominated but not selected to be on the Task Force as points of contact for the redesign.
- Feb. 3rd math faculty convening will be a faculty engagement activity. At the roundtable discussions in the afternoon the members of the Task Force will facilitate discussions and collect feedback on the following questions:
    a. How will redesign improve student access?
    b. How will redesign improve student success?
    c. How will redesign enhance program quality?
    d. What are barriers or concerns you have about redesign?
    e. What are your suggestions for obtaining faculty input into the redesign process?

A closing discussion was described as 'the elephant in the room': Are college math faculty going to lose jobs because of redesign? This is the 'hard question' that will come up and a concern that will be in the minds of many faculty when they here about redesign.

Next Steps

Meet again in same location and same time (10:00 to 2:30) at GTCC on January 28th to review existing competencies of Math 060, 070, 080.