



## 2009 Math Education Summit

Report Date: October 30, 2009

The following is an overview of the 2009 Math Education Summit. This summit was developed through the collaboration of the three institutions of higher education in Jackson County, the Jackson County Intermediate School District and leadership from Jackson County's high schools. Hosted by Jackson Community College and funded through the support of South Central Michigan Works!, Achieving the Dream and Consumers Energy, the initiative was part of the county-wide effort to increase the college-readiness of Jackson County students.

### EXECUTIVE SUMMARY

The Math Education Summit was hosted by Jackson Community College from August 19, 2009 through August 21, 2009. The total number of summit attendees exceeded sixty. The attendees varied in professional background; specifically middle and high school math educators, post-secondary math educators, principals, superintendents, post-secondary presidents and administration, and a representative from the Michigan Department of Education. The summit focused on increasing the college readiness of Jackson County students in math by 5% in 2010 as measured by incoming placement and ACT scores from Baker College, Jackson Community College and Spring Arbor University.

National and local data show that students are increasingly challenged by college-readiness, particularly in the area of mathematics. Although some students are overcoming barriers and achieving success, studies show that collegiate math preparedness is becoming the exception, developmental education is becoming the routine and the vast majority is underprepared for college-level math.

In the January 2008 report *Beating the Odds: The Real Challenges Behind the Math Achievement Gap – And What High-Achieving Schools Can Teach Us About How to Close It*, prepared for the Carnegie-IAS Commission on Mathematics and Science Education, authors Susan Goldberger and Katie Bayerl argue that the math gap appears to be the results of two deeper, generally overlooked factors:

- The broader failure in the schooling experience of low-income and minority students that leaves many of them discouraged and disengaged, lacking the confidence to tackle the challenging work and the resilience to persist in solving difficult problems.



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- The particular failure in math classrooms to address the psychological and learning needs of students who have not experienced success in math previously, without watering down critical content.

With these facts and conditions weighing heavy on our hearts, our desire was to bring the math educators (and other interested parties) of our community together to have an in-depth dialogue concerning these challenging conditions that students are currently facing and to offer recommendations for corrective measures and solutions.

The Math Education Summit was organized by the Math Education Summit Planning Committee, consisting of the following individuals:

- Cindy Allen, Executive Director of Community Relations, Jackson Community College
- Tina Banach, Research Analyst, Jackson Community College
- Randy Cook, Superintendent, Springport Schools
- Charlotte Finnegan, Dean of Student Services, Jackson Community College
- Kristi Hanby, Math/Science Coordinator, Jackson County Intermediate School District
- Garnet Hauger, Math Professor, Spring Arbor University
- Patty Kaufman, President of Baker College of Jackson
- Jerome Krakowiak, Math Professor, Jackson Community College
- Kristi Laird, Math Chair, Jackson Community College
- Kevin Oxley, Superintendent, Jackson County Intermediate School District
- Amanda Patterson, Executive Assistant to the President, Jackson Community College
- Dr. Daniel J. Phelan, President of Jackson Community College
- Rod Stewart, Associate Vice President for Academic Affairs, Spring Arbor University
- Brian Thompson, Principal, Grass Lake High School
- Cindy Vangieson, Dean of Developmental Education, Baker College
- Dr. Charles Webb, President of Spring Arbor University

The Math Education Summit began with a welcome from Dr. Daniel J. Phelan, President of Jackson Community College and a show of support by many Jackson County principals and superintendents. Throughout these three days, there were four presenters speaking on different applicable topics, a moderator, and eight facilitators for



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to assist discussions throughout the event. Each presenter presented for a minimum of thirty minutes and then the moderators gave a charge to the entire summit to have an in-depth group dialogue following the outlined points they were given concerning each subject. Each group was charged to identify barriers and provide solutions and recommendations concerning student success in mathematics. At the close of each day, the group facilitators compiled their groups' findings. The summit presentations were recorded, covered by local media and the recommendations of the summit attendees were compiled and written for distribution to Jackson County superintendents and other community leaders.

There was a carefully constructed agenda to focus the attendees on awareness of what national, regional and local data are showing, course content of both secondary and post-secondary institutions, placement instruments used by post-secondary and what supports need to come from K-12, post-secondary and the community. Specific focus centralized on classroom techniques to help guide students into reaching conceptualization and application. Math educators also shared classroom techniques that allow an educator to reach students' cognitive behaviors and learning retention.

The following are excerpts from an August 23, 2009 Jackson Citizen Patriot newspaper article reporting on the summit:

### Excerpt 1:

Denise Glaspie, a math teacher at Jackson's Middle School at Parkside, flipped through a small notepad packed with ideas from the three days, picking out things she plans to do right away. One is to invite parents at her school's open house to visit her classroom so they become more comfortable with math. Some who work with math in their careers can also offer their expertise, she said. *"I have not been able to experience anything like this (summit),"* she said.

### Excerpt 2:

Terry Howdyshell, a math teacher at Jackson Christian High School, said his classroom is set up in a traditional style, but he plans to experiment with different models of teaching and technology this year. *"I have a SMART Board that I'm going to start using,"* he said, referring to the modern electronic version of a chalkboard that mimics an oversized computer screen.

The math educators participating in the summit set long-term and short-term goals for improving instructional practices in their own classroom. Their goals, along with their



contact information, were compiled for online publication so that collaboration can continue after the summit.

Math educators established five priorities for larger initiatives that will require time and commitment of educators, secondary and post-secondary leadership and the community. The priorities include parent education, a community speaker database, early remediation of math skills, math lab support and elementary math specialists.

#### *Parent Education*

This group explored possibilities, such as joining up with already-established county activities, to get the word out to parents about the relevance of math as well as tips for math enrichment that parents could do with their children. A similar group in the county has been contacted to request that their efforts be combined or do not overlap.

#### *Community Speaker Database*

Business owner and entrepreneur, Dale Moretz, spoke on Friday morning and his insights into the use of mathematics were enlightening. Educators see a community speaker database as a great opportunity to tap into some accomplished community members who can convey to students the application of mathematics in their field.

#### *Early Remediation of Math Skills*

Educators who discussed this goal were interested in seeing early remediation of skills. Ideally, this would consist of a flexible system for allowing students in and out of remediation as assessed on a regular basis and could occur at any grade level.

#### *Math Lab Support*

The leaders of this group, along with those from the early remediation group, agreed that they are looking at similar things. The difference here would be more technology and that math labs would more likely occur in upper grades or at the post-secondary level.

#### *Elementary Math Specialists*

Proponents of this initiative realize the importance of helping students at a very young age to develop algebraic thinking. Math specialists at the elementary level could work similarly to literacy coaches or be assigned as a co-teacher during math.

The outcomes and initiatives of the 2009 Math Education Summit have been distributed and made available to community leaders throughout Jackson County.



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Recommendations have already been implemented by math educators in their classrooms to reach conceptualization, application, cognitive behaviors and learning retention. A web site, [www.jchea.org](http://www.jchea.org), hosted by the Jackson County Higher Education Alliance (JCHEA), makes accessible the documents and findings of the summit, along with a blog for the attendees to continue collaboration. A follow-up meeting is anticipated to be held in mid-winter 2010 to report-out on the progress of the five larger recommendations and further refine action plans.