EDITORIAL

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For the past three years approximately 100 college/university mathematicians/mathematics educators from Missouri have been involved in the Missouri Undergraduate Mathematics Faculty Enhancement project. In this project, funded by the National Science Foundation and the High Plains Consortium, participants investigated and discussed a number of issues related to the undergraduate mathematics curriculum. A series of four conferences provided participants with opportunities to review reform–based curriculum materials and discuss curriculum–related issues such as how to use a variety of instructional approaches, the role of technology in teaching/learning mathematics, the role of the teacher in creating an active learning environment, using collaborative learning groups, the role of applications and, alternative forms of assessment. Keynote speakers and workshop leaders for these conferences included David Pengelley, Claudia Pinter–Lucke, Christine Stevens, Chris Hirsch, Johnny Lott, Diane Resek, Deborah Hughes–Hallet, David Smith, Eric Hart, Lisa Shute, Nancy Crisler, and Ann Perry.

College and university participants were also able to investigate reform–based secondary mathematics curriculum materials. Discussion of the use of these materials focused on the implications of their use for the undergraduate mathematics curriculum and for teacher preparation programs for secondary mathematics teachers.

Overall, participants indicated that the project provided them with useful, relevant information and that the opportunity to discuss a variety of issues with colleagues was especially valuable. The majority of the participants indicated that they had used or planned to use reform–based curriculum materials in their classes. Most said they were using more student–centered activities (projects, writing assignments, small group activities, etc.) and alternative assessment tasks than they had used in previous years. Participants were also using graphing calculators and computers in a wide variety of courses. These were most often used to facilitate student investigations and projects. The participants agreed that the use of technology helped students focus on mathematical relationships, use multiple representations of mathematical concepts, use graphing, and manage lengthy or cumbersome computations.

Participants were encouraged to use a variety of materials and activities from the conferences in their classrooms. They were also asked to share materials and activities that they used/had developed. These were shared among the participants

via workshops, discussion sessions at professional meetings, a project web page and list serve, and a monograph. Persons interested in obtaining copies of the monograph should contact me using the information found on the inside back cover of the journal.

Overall, the project participants felt they became more knowledgeable about curriculum reform materials and related issues. Further, they were willing to try new ideas and activities with their students. Most indicated that the project had provided them with experiences that reinforced and extended their commitment to professional development.

Opportunities for mathematicians/mathematics educators to engage in investigations and discussions such as these are vital. Those of us who teach and study mathematics see it as a dynamic field of study. In a similar way, we must view the undergraduate curriculum as dynamic. We should be continually exploring strategies and tools that we can use to help students see mathematics as dynamic, interesting, and relevant.