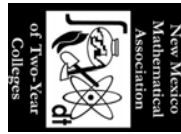


NMMATYC News

October 4, 2002

Volume 13

Issue 1

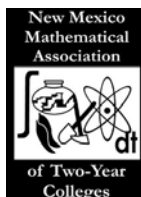


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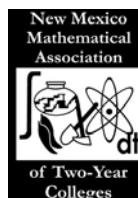
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Inside this issue:

President's Message	3
AMATYC "Perfect Conf"	6
Web Resources	7
Joint Confer- ence in El Paso	8
Upcoming Conferences	9
From Our Neighbor	10
Student Retention	12
An Invitation	14
2003 Conference	15

President's Message

ROCKFORD BURRIS

I hope that everyone had a great and rewarding summer both professionally and personally, which for many of us, started after our conference in El Paso. Joanne Peeples and her assistants organized and ran a great conference. I also appreciate her effort in helping to coordinate our conference with the AMATYC Regional Conference on Teacher Preparation that took place after our annual conference.

Bill Pletsch completed his two-year term as our President. His dedication and concern for NMMATYC was evident in his work and service during the last two years and I appreciate all his endeavors, thanks for a job well done!

As we begin this two-year term, a great group was elected, or appointed and agreed to serve as your board. President-elect is Ellen Schneider, Secretary is Mary Ellen Gallegos, and Treasurer is Bob Skaar. The AMATYC delegate is Joanne Peeples and the Articulation Task Force Liaison is Kitty Berver. Marlene Chavez-Toivanen is chairing the Membership Committee, and Mary Caffey is chair of the Nominating Committee. Lucille Farrington will be the newsletter Editor. A job she has

performed very well for NMMATYC before. The 2003 Conference Committee Chair is Lynn Onken, and the 2004 Conference Chair is still to be named. Bill Pletsch will assist as Past-President. In addition to the board positions, Lucille Farrington will work with the Student Math League, Julie Dupree will assist with the newsletter, and Mary Robinson will continue to be the NMMATYC Webmaster.

Over the years our organization has grown and become an important asset for the Teachers of Mathematics in New Mexico and the surrounding areas, Two-year Institutions, as well as the Four-year Institutions. During this term I hope to continue to facilitate its growth and to serve all the members. Communication is vital to this organization, so please feel free to contact me or any board member about issues and concerns that we can help you with. The e-mail and school addresses for the current board members are printed in this newsletter.

Remember to encourage your colleagues that did not attend the 2002 conference to send \$5 dollars to Marlene Chavez-Toivanen at NMSU-Grants to renew their membership, as well as encourage your new faculty and staff to pay the five-dollar membership fee and join NMMATYC. After people renew or join they will then be able to get the NMMATYC Newsletter.

San Juan College (SJC) in Farmington will be hosting the 2003 conference on May 30-31, 2003. So if you have ideas for sessions or guest speakers, please send this information to Lynn Onken at SJC. It will be based upon Mathematical Linkages both with other subject areas as well as linkages to the community.

The AMATYC Conference is approaching and I just hope all interested NMMATYC members have made their travel plans and have finalized travel arrangements. I look forward to seeing you in Phoenix. Remember to set aside time on Saturday night to attend our annual NMMATYC evening dinner. Remember

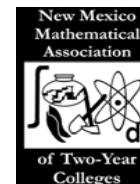
this dinner is for all interested NMMATYC members and their invited guests at a special restaurant, to be named later, in Phoenix.

Other important AMATYC news, which I need to remind NMMATYC members about, is the deadline for Nominations for the AMATYC Teaching Excellence Award. This date is Monday, December 9, 2002. The completed nomination packets are due to Judy Ackerman, AMATYC President-elect. For more information on what should be included in the nominating packet visit www.amatyc.org.

The AMATYC Student Math League Competition now has only 2 rounds, one during the fall semester and one in the spring semester. Round 1 is scheduled for November 1-November 16, 2002 while round 2 is scheduled for February 21-March 15, 2003.

It is shaping up to be a very busy year and I look forward to serving you, the NMMATYC members. Remember this is an election year so become involved in the election process and exercise your right to vote! I encourage each of you to vote for candidates who will have a positive effect on Mathematics education in our state. We need leaders who realize that Mathematics and Science Education as well as Educators in these fields are vital to our state economy, educational systems and over all well being.

Remember the impact your classroom instruction has on your students. How mathematics changes their lives and it gives them the power and flexibility to have more opportunities and choices in their future jobs and careers. We do make a difference in our students' lives!



"The Perfect Conference"

Mary Robinson, AMATYC Southwest VP



Hello to all. As the AMATYC Southwest Vice President, I am pleased to invite all of you to the 28th Annual AMATYC Conference, this year to be held at the Phoenix Civic Plaza in Phoenix, Arizona, November 14-17. Since 28 is a perfect number, the local conference committee, headed by Anne Dudley, chose "The Perfect Conference" as the theme for this year's activities.

For most of us in New Mexico, it is possible to drive to Phoenix in reasonable time. I hope that the close proximity of the conference and the possibility of several people sharing rides to avoid plane fares will make it possible for many of our New Mexico two-year college mathematics instructors to attend this conference who otherwise might not be able to go. And for those of you who are not excited about driving, the plane fares are very low on Southwest and Americawest Airlines. Check the specials on their websites for exact fares.

One of the highlights of this year's conference will be the *Symposium* presented by Dr. Julian Weissglass entitled, "What Will it Take to Create Equal Opportunity in Math Education?" You may remember that Dr. Weissglass was NMMATYC's keynote speaker at our conference held in Las Cruces several years ago. He is a tremendous speaker and his topic is vitally important to what we do. As a past chair of the AMATYC Equal Opportunity in Mathematics Committee, Dr. Michele Diel has played a prominent role in helping to organize this Symposium and make it happen. We are grateful to her for her efforts on behalf of all of our students.

Several NMMATYC members will be presenting this year and the entire program is top notch. If you do not have a hard copy

of the Mini-Program and would like to see the sessions that will be presented, log on to the AMATYC website at <http://www.amatyc.org> and access the online version of the Mini-Program. I know you will be as impressed as I am with the quality of the speakers and the pertinence of the topics to the issues we face in teaching two-year college mathematics today.

I am looking forward to seeing many of my NMMATYC colleagues at the 28th Annual AMATYC Conference and hope that you will make every effort to attend what promises to be one of the best AMATYC conferences yet. Of course, it will have to be "The Perfect Conference" since it is in our region☺ See you there!

Web Resources

Visual Calculus

<http://archives.math.utk.edu/visual.calculus/>

Tangrams Online Provides a set of tangram pieces and a puzzle outline. Try to fit the pieces onto the outline. The outline is different each time you load the page. This page was featured in the BBC learning series

<http://www.platypus-share.com/activities/tangram.html>

21st Century Problem Solving The site describes modern problem solving methods from pre-algebra through college and beyond. It solves the existing problem of students not being able to solve word problems

<http://www2.hawaii.edu/suremath/home.html>

<http://www.mathed.org/>

Brain Teasers and Mathematical Puzzles Challenging mathematical puzzles with interactive feedback and explanations. Divided into three difficulty levels to enhance logic and mathematical skills. <http://www.syvum.com/teasers>



Another Perfect Conference

The joint NMMATYC/TexMATYC conference was held last May at the Transmountain Campus of El Paso Community College. Bill Pletsch and Janet Heath held a preconference workshop on the 16th: *Don't be Technological Road Kill*. And, there was a cookout in the Franklin Mountains State Park that evening where we watched the sunset over the desert and learned about the geology of the region from Dr. Kathleen Devaney (EPCC Geology instructor).

The conference started bright and early Friday (the 17th) morning, with over 30 different presentations Friday and Saturday morning, and with over 130 people attending the various sessions. There was also a "film series" that ran continuously in the auditorium, vendors to visit, food to eat, and a chance for the participants to either renew old friendships or to make new friends. Participants came from as far away as Connecticut, Minnesota, Oklahoma, and Arizona; as well as from Texas and New Mexico.

We had three Key Note Speakers: Mark Dugopolski talked about "*The Evolution of the Word Problem*"; Tom Carson talked about "*Understanding Students: Mathematics from Another Angle*"; and Richard Aufmann talked about "*Technology in Math Education: Yesterday, Today, and Tomorrow*".

At the Friday evening banquet Nancy Welliver, from EPCC, received the Michele Jimenez Memorial Scholarship and Sharon MacKendrick, from NMSU-Grants, was inducted into the NMMATYC Hall of Fame for Mathematical Teaching Excellence.

After the conference (Saturday afternoon and Sunday morning)

AMATYC held one of four regional conferences, which EPCC cohosted, concerning teacher preparation. There will be a session at the November AMATYC meeting in Phoenix dedicated to looking at the results of these conferences, and the implementation of the Teacher Preparation Traveling Workshops.

To see some pictures of the conference, go to the NMMATYC web page, and click on the conference picture link.

Other Upcoming Conferences

ArizMATYC Fall Meeting

October 11, 2002
Coconino Community College
Flagstaff, Arizona
Contact: Kathryn Kozak
kathryn.kozak@coconino.edu

AMATYC 28th Annual Conference

November 14-17, 2002
Phoenix Civic Plaza
Phoenix, Arizona
Website: <http://www.amatyc.org>

Algebra Symbolic Language Winter Meeting (with APA)

December 27-30, 2002
Philadelphia, Pennsylvania
Website:
<http://www.allconferences.net/conferences/20020502091032/>

Joint Meetings MAA/AMS/SIAM

January 15-18, 2003
Convention Center
Baltimore, Maryland
Website: <http://www.maa.org>

NADE 27th Annual Conference

February 12-15, 2003
Austin Community Center
Austin, Texas
Conference Website: <http://www.tade.org/nadewebindex.htm>

A Neighbor's View

by Irene Doo



The inaugural joint conference of NMMATYC and TexMATYC took place May 17 and 18 at El Paso Community College. Under the able direction of organizer Joanne Peeples, all participants were treated to a weekend of fun, camaraderie, and professional development.

The conference started with a sunset dinner in the Franklin Mountains State Park. After helpings of barbeque and fixings, attendees enjoyed the sunset view over the desert, and were treated to an informal presentation by the park ranger on the geology of the park. It was a great way to catch up with friends and partake of the beautiful view.

At the conference site, participants were treated to mathematical posters created by the students at El Paso Community College, as well as the humorous Burma Shave signs. Some attendees were observed walking through the hallways reading all the signs! Here's an example of the students' creativity:

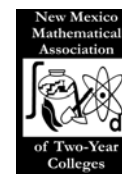
Newton and Leibnitz
as long as they lived
each called the other
derivative.
MATHEMATICS!

Getting down to business, there were about 30 presentations and workshops lined up for the two days. Topics were drawn from the areas of history, technology, learning styles, as well as instructional strategies, and subject areas ranged from, Developmental Math through Calculus. Needless to say, attendees had a

wide range of sessions to choose from and more than one lamented on the need to prioritize when multiple sessions were scheduled at the same time.

The keynote speakers, Dick Aufmann, Tom Carson, and Mark Dugopolski entertained everyone with their engaging presentations. Prof. Dugopolski discussed the evolution of the word problem, while Prof. Aufmann led the audience through a fascinating history of technology in math education. Meanwhile, Prof. Carson literally brought the house down with his beautiful guitar music and singing during the Friday night banquet. It's a good bet that his students don't view him as a boring mathematics teacher! After the banquet, there were speeches and presentations, and the grand finale – door prizes. Joanne and her team put together an impressive set of giveaway prizes, with a highlight of an HP graphing calculator. (Author's note: almost everyone at my table won a prize, except me...sniff...Gordon DeSpain, San Juan College, even got the graphing calculator!) Everyone was delighted when Steve Krevisky won the autographed baseball, as we all know what an avid baseball fan he is. Besides, he has faithfully attended these conferences for many years, traveling all the way from Connecticut, and deserved the prize.

As if this was not enough, there was a slide rule exhibit in the library, as well as ongoing math subject films playing throughout the two days. Overall, the conference was a success and generated some goodwill between the states. Although NMMATYC has been hosting their state conference for many years, TexMATYC has not, and perhaps this joint conference will serve as an incentive to develop something similar in Texas.



Mathematical Voice Versus Student Retention

J. Reid Mowrer

Assistant Professor of Mathematics

The University of New Mexico – Valencia Campus



Student retention is a pervasive problem for the two-year college. In addition, many students who obtain a degree do not leave with their degree of first choice. The common link between these two issues is often mathematics. Mathematics, or the student's perceived inability to learn it, is strongly linked to not only staying in school long enough to obtain a degree, but also to obtaining the desired degree. Anecdotal evidence supports the proposition that poor performance in mathematics correlates well (but inversely) with student retention and sub-optimal degree choices. The two-year college has a duty to address these issues as part of an effective strategic plan.

During the summer 2001 semester, the University of New Mexico – Valencia Campus embarked on an ambitious program to address this multifaceted issue. First, the lens through which the issue was to be viewed was decidedly unconventional - that the student does not have a math problem per se. This paradigm was validated from the evidence gathered at math anxiety workshops conducted at the Valencia Campus during the summer and fall 2001 semesters. Also, while the students' problems appeared to manifest in poor mathematics performance due to math anxiety, the workshops surprisingly revealed causation manifested in multiple modality. While many students presented math anxiety in classic causation form, others presented decided issues related to effective learning that resulted in poor math performance, with or without concomitant anxiety.

In addition, students who attended the workshops presented an issue of "community" – a sense that they, perhaps as a result of poor math performance and degree/career issues, did not have a deep appreciation of and commitment to their academic endeavors. Clearly this problem could subvert retention efforts that may be undertaken. As a result, the Department of Mathematics and Statistics decided to address this issue in addition to the others mentioned above.

The above framework drove the design of a new class within the Department – Finding Your Mathematical Voice. The Department piloted the class during the spring 2002 semester with a multifaceted approach to address the above described issues. Elements of the class include:

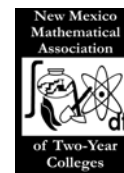
- The use of various facilitators, rather than one "instructor," to present the multitude of topics required to address as many of the relevant issues as

possible. In this way, it is believed that students will obtain a better "sense" of not only the community that they are in, but also their role as an integral member of that community.

- A discussion format, so as to foster a collaborative environment and further reinforce the idea of "community" as it relates to retention.
- Classes addressing such topics as:
 - Increasing awareness and understanding of math anxiety's causes and effects.
 - Dealing effectively with math anxiety through a variety of behavioral modification and math-specific instructional techniques.
 - Exploring the equity issues of mathematics
 - Learning appropriate coping methods, i.e. relaxation and breathing techniques.
 - Learning:
 - Study skills,
 - Time management skills,
 - Test-taking skills,
 - Math text reading skills
 - Journaling
 - Hot-penning.

To date, the class has been well received. Feedback from students who have taken the class has been positive in that they report experiencing a higher frequency of success in their mathematics classes than before, leading to (or being caused by) an increased appreciation in their ability to "do" math. Finding Your Mathematical Voice is also finding its voice as a promising required class for students taking the Associate Degree in Education, Elementary or Secondary concentration.

Editor's Note: Professor Mowrer will be presenting on the above topic at the 28th Annual Conference of the American Mathematical Association of Two-Year Colleges in Phoenix, Arizona on Thursday, November 14. The presentation, "The Math of Least Resistance," will be given at 10:40 a.m. Registrants of the Conference are cordially invited to attend.



Invitation to the AMATYC Symposium in Phoenix

by Michele Diel, past EOMC Chair



The strength of the New Mexico Mathematical Association of Two-Year Colleges is in the diversity of our membership. We each have gifts that we bring to the organization: our personality, our pedagogy, our research, and our understanding of the field. Our commitment to post-secondary mathematics education unites us as colleagues, yet we interpret and implement our commitment differently. We employ diverse instructional strategies, espouse diverse assessment strategies, and engage in collegial disagreements about the appropriateness of certain innovations in mathematics education. It is through the informed interaction of a diverse two-year college mathematics faculty that we create the best possible mathematics education for the diverse populations we serve.

Please join your colleagues at the 28th AMATYC Annual Conference in Phoenix, Arizona on November 14-16 to share your ideas. A highlight of the conference will be a symposium sponsored by the Equal Opportunity in Mathematics Committee featuring Julian Weissglass. Dr. Weissglass, is Professor of Education and former Professor of Mathematics, University of California Santa Barbara. He is also the Director of the National Coalition for Equity in Education." His most recent book is *Ripples of Hope: Building Relationships for Educational Change*. Dr. Weissglass spent a year and a half on the staff of the National Research Council's Mathematical Sciences Education Board, serving as liaison with the Department of Energy, working on professional development endeavors, and for the last six months served as Acting Director of their Office on Equity and Diversity. He directed The Equity in Mathematics Education Leadership Institute, funded by the National Science Foundation, a project that works with educators nationally to assist them in addressing equity issues in their reform efforts.

Dr. Weissglass will conduct a plenary session from 8:15-9:15am followed by a 3.5-hour symposium on Thursday, November 14. According to Dr. Weissglass, the symposium s on "increasing our understanding of the effects of educational inequities and our ability to do something about them (It) will provide people with the chance to reflect on their assumptions and practices with regard to students from groups who are under-represented in mathematics."

Participation in this worthwhile symposium is limited. Please indicate on your registration form that you plan to attend. See you in Phoenix.

Creating Linkages

Announcing the Annual NMMATYC Conference

May 30 – 31, 2003

San Juan College

Farmington, NM



Be sure to mark your calendars for the next annual conference of NMMATYC. This year San Juan College in Farmington will host the conference and the theme of the conference will be "Creating Linkages". Plans are being made for a great conference and you'll want to attend for both the program and visit to the Four Corners area. Excursions to interesting sites (Chaco Canyon, Mesa Verde, Durango, etc.) will be planned to coordinate with a program of linkages to science, history, and secondary education. Plan to be there!

Individuals who are interested in working on a conference committee as well as presenters and speakers are needed. If you'd like to participate in either a large or small way, please contact:

Lynn Onken, Conference Chair

Email: okenl@sjc.cc.nm.us

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