

MATH SPIN News

Newsletter of the NADE Math Spin

February 2001

Looking toward Louisville

Fellow Math SPIN Members,

As you are aware, Roberta Lacefield has passed on the chair responsibilities in order to escape the alternative of a career at McDonald's. She deserves our applause for two years of dedicated and productive service to the SPIN. During those years, the SPIN has expanded its website, added a new listserv connecting our e-mail list to the website, continued to use the newsletter as a forum for exchanging ideas and information, and met annually to renew our connections as peers and professionals.

Speaking of the meeting, the NADE leadership responded positively to our request to schedule this year's meeting at a time when there are no conflicts with other math presentations. Barring unexpected changes, the SPIN meeting at Louisville is scheduled for Thursday, March 15 from 5:00-6:00. (Please note that there *were* changes last year, so check the conference schedule to be sure.) We hope for good attendance.

The agenda for this year's meeting is currently in the planning. At the top of the agenda will be the election of a new chair (and other positions, if needed). If you are interested in a leadership position, please contact me at your earliest convenience. As in the past, we would also like to provide an opportunity during the meeting for SPIN members to share ideas, exchange information, etc.. If there is something you would like to present or discuss, let me know so I can add it to the agenda. Topics currently on the list include "issues" in developmental math, ways to improve the exchange of information among SPIN members, SPIN goals, and the use of SPIN funds. I would appreciate any additional ideas, thoughts, or opinions you may have.

Finally, *if you have any information regarding professional development opportunities, resources for developmental math educators, or anything else that would benefit SPIN members, please bring it with you to the meeting*, or if you prefer, send it to me.

Hope to see you all in Louisville.

Tom Armington
(tmarmington@juno.com)

Upcoming Events

NADE 2001 Conference

Louisville, KY
March 14-18, 2001

Technology Institute for Developmental Educators

S.W. Texas State
University
San Marcos, TX
July 22-27, 2001

(Additional information on these
events can be found at
www.database@nade.net)

Reinventing the SPIN

As of November 1, 2000, the NADE Executive Board has enhanced membership benefits by including free membership in one SPIN. This should make it easier for all of us to keep up with our SPIN involvement. Membership in additional SPINs will continue to cost \$5 each.

SPIN members should soon receive a survey soliciting feedback on many SPIN-related topics. The results of these will be shared with SPIN chairs at the Leadership Workshop. This is a great opportunity to improve our SPIN. *Please take a minute to fill them out, especially if you will not be in Louisville.*

A number of SPIN policies have also been changed in an

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Reinventing the SPIN (continued from front page)

effort to strengthen the SPINs. Among these, members will be asked to assess the previous year's goals and to brainstorm new goals. Other changes focus on the responsibilities of SPIN chairs, who will be asked to serve only one year terms instead of the current (eek!) three years. These terms may be renewed up to six times with Board approval each year.

As past chair, I am thrilled to see the Executive Board making SPINs a priority. In the past, I have felt as if no one really cared about us, and we were left to flounder. These changes show that the Board is listening to the concerns we have voiced. If you attend the conference this year, please make a point of thanking a Board member for their efforts on our behalf.

Roberta Lacefield

"Placement Issues in Developmental Math"

(The following is a response to the article on "Placement Issues" that appeared in the fall newsletter.)

The article, I believe was excellent in pointing out the key issues regarding appropriate placement of students in math courses. Our university is about to replace its Placement Test, which has been used for 18 years, with a diagnostic assessment designed to determine current student knowledge of math topics specifically covered in our developmental (proficiency) level math courses. We feel placement into an appropriate first course in math will be improved by taking this action. An expanded version of the diagnostic test will be used as an exit exam for students who participate in the proficiency level courses.

I agree fully with the point made that course linkage is a critical factor in correct student placement and ultimate math success. Faculty teaching courses for which these students are preparing need to be aware of students' background, math knowledge, and prior success in "feeder" courses. More specifically, those faculty must be made aware of the specific math work students have completed to ensure that their teaching and expectations are in tune with the students' background and abilities.

Unfortunately, we who teach developmental math courses are sometimes accused of not adequately preparing our students for their next level math course when in reality the issue may be lack of proper linkage or information between course levels, resulting in unrealistic expectations on the part of some faculty. A common exit exam and shared course syllabi might help clarify any misunderstanding. Proper first course placement is very important, but equally important is what environment students progress to and how closely it links to what they are learning in their developmental courses.

Dick Sturgeon
Coordinator, Developmental Math
University of Southern Maine

NOTES/ANNOUNCEMENTS

☛ The Math SPIN web site is located at www.way.peachnet.edu/devstudies/mathspin/. The site has information about SPIN activities and links to various web sites of interest to developmental math instructors. Past issues of the newsletter are also posted on the site. Members are invited to contribute links or other information to the site. Those interested should contact Daryl Stephens at stephen@etsu.edu.

☛ The newsletter welcomes submissions of any kind that members feel are appropriate including announcements, comments, articles, teaching tips, research, etc.. Materials should be sent to:

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Issues in Developmental Math: **COURSE LINKAGE**

Serving primarily as prerequisites for other courses, developmental math courses should be closely linked *by design* to those courses which follow. Traditional linkages emphasize the sequencing of math topics leading toward pre-calculus. However, developmental math courses also serve as primary prerequisites for a wide range of courses in the sciences, business, and other fields. Common examples include chemistry, astronomy, physics, computer programming, and nursing. Consequently, linkages in developmental math should be bi-directional, preparing students for higher level math courses as well as for courses in the various other disciplines that rely upon a strong developmental mathematics base.

Within the developmental area, traditional linkages between pre-algebra and algebra generally emphasize *overlapping coverage* of specific topics, particularly variable expressions and linear equations. While this clearly serves to connect these courses, the common practice of teaching the arithmetic portion of pre-algebra in isolation from its applications in algebra impedes the linkage. Pre-algebra instruction should emphasize both the curricular overlap and the use of computational skills within the context of their algebra applications. The same is true with respect to linkage between pre-algebra and other disciplines. Application problems should be drawn heavily from the various college disciplines which require a strong arithmetic base. For example, operations with decimals might be linked with business computations, proportions with medical calculations, or percentages with chemical applications.

Traditional linkages between developmental algebra and higher levels of math tend to focus on the *extension* at higher levels of concepts covered at the developmental level. While this creates connections between courses, the linkages can be deeper. The primary link between developmental algebra and pre-calculus mathematics should specifically be the development of the concept of the function. Whether or not functions are actually introduced at the developmental level is not as important as whether basic algebra topics are presented in a coherent, related manner leading toward functions. Unfortunately, the tendency at the developmental level to treat algebra as a collection of unrelated (or minimally related) topics impedes this linkage. Connecting algebra to other disciplines is also necessary. As with pre-algebra, application problems should be drawn from other college disciplines that require algebra proficiency. Examples might include the linkage of variable expressions to computer programming, linear equations to scientific formulae, graphing concepts to financial trends, or quadratic equations to simple physics applications.

In addition to expanding traditional linkages, developmental math instructors must also consider the impact of instructional reform on course linkage. With the myriad of new approaches to teaching developmental math, linkage issues are more complex today than in the past. For example, faculty teaching with graphing calculators must weigh how their emphasis on calculators matches with the instructional approaches or expectations of courses that follow. The primary question remains whether skills learned at the developmental level link closely with what will be expected of students at successive levels. If faculty in subsequent courses express dissatisfaction with the skills of students enrolling their classes, perhaps the linkages need to be revisited.

(Editor's note: Additional information on this topic or responses to the thoughts outlined above are welcome. Comments will be published in upcoming issues of the newsletter.)

Conference summaries, Articles, Announcements, etc

Last year, in an effort to share the NADE conference with those unable to attend, the Spring newsletter was largely devoted to summarizing conference math presentations. We would like to do the same again this year. To that end we are asking SPIN members who will be presenting at the conference to consider providing us with a short (a few paragraphs) summary of what you consider to be the highlights, main ideas, or major points of your presentation. We would also like to ask SPIN members to consider submitting information about resources and professional development opportunities, along with any other announcements or articles. Items can be given to Tom Armington at the SPIN meeting in Louisville, or sent to the address on page 2. Thanks in advance for committing to this project.

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