

Mathematics across the Discipline Impact Committee



2006-2007 MAC³ “Impact” Committee Annual Report

Submitted by

Isabel Rodriguez-Dehmer, College Prep, North Campus,
Committee Chair

The challenge to teaching math study skills are many, but careful planning and collaboration with other faculty, academic support and students service staff help overcome many of these challenges.

Committee Members;

Dr. Thomas Meyer, Beverly Moore-Garcia, Dr. Miriam-Frances Abety, Miriam del Campo, Prappis Pitayapisut, Dr. Linda Burton, Marilyn Gottlieb-Roberts, Bernard Mathon, Dr. Jaime Bestard

Resource, Dr. Dwight Smith, ASSOCIATE PROVOST FOR ACADEMIC AFFAIRS

Statement of Purpose/Mission

The mission of our committee is to share the vision and have an “*impact*” on curriculum, students and faculty. “Winning at Math for all”

- Promote a lifelong appreciation and positive attitude about math
- Decrease math anxiety, and see math and science as relevant.
- The impact on faculty will be assisting to reduce anxiety about Learning Communities;
- Showcase “best teaching practices” College-Wide, and support creative teaching and learning.

History/Contexts

Mathematics is the gateway to future studies in the vital fields of science, engineering, and technology. Like reading, math is universally accepted as one of the core academic subjects. Both are taught from the earliest grades, are regularly included in high stakes assessments, and are understood to be included in high-stakes assessments, and are understood to be the gateway to future learning opportunities. Many students regard the subject of mathematics with fear and anxiety-probably because people tend to dislike the things they’re not good at.

Committee Charge

- Promote the concept of Math across the disciplines
- Promote summer and winter institute
- Create linkage to other disciplines
- Help people know they can part of this and give concrete steps
- Tools to put into practice

Impact on Students

- Promote lifelong appreciation for Math and Science
- Promote “math in daily life” activities
- Share positive experiences in math courses
- Develop activities in quantitative reasoning

Impact on Faculty

- Promote collaboration with Math, Science and other Disciplines
- Broadening horizons with other Disciplines
- Provide workshops to help reduce anxiety regarding Learning Communities
- Assist in creating thematic units between disciplines (Model after successful Learning Communities)

Committee Development and Activities for 2006 Goals & Actions

2006

Team Leaders Dr. Miriam-Frances Abety, Interamerican, & Miriam Del Campo, Kendall

Innovative Action:

1. SLS incorporated in as many courses as possible
2. FACE (First Year Experience Program)
3. Provided learning prescriptions for underachieving students
4. Dr. Abety and Lourdes Gonzalez created program that incorporated MAT 0024 & SLS1535 Project S.M.I.L.E. (fall 2006-1)
5. Established collaboration between advisement and math department (liaison Lourdes Guigou)
6. Mathematics Web Page re-designed for more user friendly use for students
7. Frequent assessment
8. Project EXITO tutors use CPT reviews to assist students
9. Use electronic progress reports
10. Implemented instructional seminars for students repeating the college prep courses.

2006

Team Leaders- Prappis Pitayapisut, and Michaela Tomova, Director of learning Support and Computer Courtyard (Medical & Homestead)

Innovative Action:

Student Center Plan Ongoing from last year (2005)

Tutors discuss students' math concerns and work with each individual to find the appropriate resources:

1. One-on-one clarification of a concept (This may only be a brief meeting or perhaps last up to thirty minutes. Tutor then assigns problems for the student to complete independently)
2. Students are urged to verbalize how they work out problems
3. Encouragement to practice, practice, practice! We have practice sheets of problems (no answers) for students to work.
4. Time management conversation.
5. Discussions on how to use the text/workbook efficiently
6. Nursing text, Dimensional Analysis for Meds by A. Curran, together with the c.d. gives excellent instructions and practice problems.
7. Suggestions for forming a study group. We do not want the students to become dependent on a tutor. Offer the Center's facilities with white board for group.
8. Software Applications are suggested:

- a. “ProCalc”, drill & practice using dimensional analysis
- b. A web based pharmacology math program is linked to the Student Success Center’s web page.

Although the list mentions a nursing text and software, program specific resources are available for most courses. Reference texts are available; however students are expected to bring their required texts, etc. Other web based applications available are “Understanding Test Anxiety” and Plato.

2006

Team Leader Bernard Mathon, Wolfson.

Innovative Action

1. In collaboration with Marilyn Gottlieb-Roberts developed and taught a **MGF1107/ARH1000** Learning Community 2005-1 and 2005-2.
2. Ongoing projects to establish contact with faculty members who would like to teach Art and Math.
3. With a quantitative instrument continue to track changes in participating students’ attitude toward mathematics.
4. They have continued to enhance the curriculum to encourage interdisciplinary thinking, the development of new perspectives, and a fresh take on critical analysis.

2006

Team Leader Dr.Linda Burton, Homestead

Innovative Action

1. Learning Community

I continue to conduct Learning Communities with *MAT 0020 and SLS 1535* for the last four years in the fall term. The last three years have been most successful since the SLS instructor has experience with at-risk math students. The success rate for these classes has been better than others. I think this is due to improved attendance, increased student contact, and bonds created through shared activities in the SLS class.

2. Frequent Testing

I continue to implement frequent testing in *MAT 0020*. Students take 14 tests during the semester. This strategy encourages attendance and regular studying. Success rates indicate the value of frequent testing.

3. Math Retreat 2007

I am coordinating efforts for the Math Retreat scheduled for March 2007. We will explore our progress thus far and examine college and discipline initiatives. Topics such as QEP progress, global issues to the classroom, Gen Ed requirements, Learning Theory and research related to math success, etc will be presented and discussed.

2006**Team Leader- Dr. Jaime Bestard and, Hialeah****Innovative Action:**

1. I attended the Summer Institute 2006, with the T- Link
2. Participated on Conference Day with the analysis of the Summer Camp in the EEC, a project to incorporate high school students to the math track
3. Participated in the MAA North East regional meeting with preliminary results of the influence of the laboratory support in the developmental courses.
4. A study has been developed to track the interaction connecting students vertically, from MAT 0020-MAT 1033 and MAC 1105 to STA 2023 and horizontally, from STA 2023 to PHI 2604 or HUM 1020. Students will register in the fall semester to take MAC 1105 and then STA 2023 sequentially with the same professor (they may have taken the previous developmental or transitional courses also). In addition, they will take the EXCEL course concurrently with the STA 2023 course in the spring term. This T model incorporates mathematics into PHI2604 or HUM1020 by linking a Statistical Methods STA2023 class to social data analysis. Since students may follow another path they may be tracked by the applications to other subject they take in their respective majors later. Students will study the theory and methods of statistical methods and applications and then utilize their newly learned skills in EXCEL to sort, describe, and analyze data. Students will enroll in both courses concurrently and the one class will complement the other. Having the same student population in each class enables the teachers to assign group activities and projects that can be discussed and implemented in both courses. This project may link to variants involving other subjects or disciplines either horizontally or vertically across the curriculum.
(Project will be in collaboration with Professor Maria S. Constantinidis, Hialeah)

2006

Logistics

Team Leaders Dr. Thomas Meyer, Inter American and currently at Wolfson,
and Beverly Moore Garcia, North Campus

Innovative Action:

- In administrative positions, this team maintains a liaison role to ensure Learning Communities are linked appropriately.
- Deal with upcoming programming issues with Odyssey as they surface administratively
- Disseminate updated information from Institutional Research to check statistics and research formats.
- Serve as advisors for the Math Across the Disciplines committee members

Ms. Moore -Garcia

North Campus has implemented the following to overcome these logistical challenges:

- A Student Services grant was implemented to study how best to support learning communities.
- Clear communication was established between the Campus Scheduler and the chairs. Agreement was reached that each learning community course would be identified on the Master Class Schedule with the following information:
 - L1 designator
 - P1 designator
 - Student notes: identify each course in the community by reference number Ex: CLP 1006 "This course must be taken with MAT 1033(#360951) and Mac 1105 (#360813). Students who do not register for all three courses will be dropped."
 - The student notes are coded with a "j" so that the notes appear on the advisement screens, open classes' screens, and print on the student's schedule
- The Campus scheduler enters the courses as both "stacked and co-requisites" to create a registration error needing an override should students not be registering for the correct combination of courses.
- However, the most essential element of a successful learning community is the dedicated faculty members who monitor their class rolls during the registration process and create flyers to educate advisors and to market the advantages of the learning community to students. North Campus faculties have been very committed to the success of learning communities.
- Lastly, the North Campus has used part or its entire information page in the student registration handbook to market its learning communities.
- Expansion of learning communities is evident on North Campus. In 2005-1 the North Campus had 18 classes involved in learning communities serving 476 students. In
- 2006-1 the campus has 30 classes in learning communities serving 633 students

Dr. Myers has added two comments related to our goals below:

One, with respect to the orientation, an Adjunct Faculty Task Force has been established to create and Adjunct Faculty orientation and the Math Chair from IAC, Jermaine Brown, are on the committee.

The EAP discipline is working on encouraging students in levels 5 and 6 to start taking Math courses while they finish the EAP requirements

Information Dissemination

Isabel Rodriguez-Dehmer, North Campus

Innovative Action:

1. Design and maintain Math Across the discipline Share point <https://spsd.mdc.edu/cwc/mad/default.aspx>
2. Assist in the planning of MAC³ 2007 Winter Institute
3. Team taught with Lourdes Espana the “Circle of Life” learning communities of (Math 0024 and REA0003) via WEBct/Mymathskillslab (hybrid). Students midterm registered for MAC1105 (one of the goals –ease fear & anxiety of math)
4. Provide professional articles and other resources on thematic lessons for Learning Communities.
5. We presented the “Circle of Life” Learning Community at the Annual Florida Department of Education Diversity Conference <http://www.fldoe.org/CC/connections/presentation.asp>
6. Lourdes Espana presented at the 2006 Annual FDEA conference. (Learning Community in an Hour)

Finally as a committee in a grassroots' capacity, our goal is to ensure that we continue to impact curriculum in many levels not only with innovative instructions and activities, but ensure that the vision is passed on to perhaps cautious or doubtful faculty and students that would like to do so, but do not know where to begin.

Recommendations and goals for the next academic year 2007

- Each team will continue to respectfully impact and support their action plan and goals posted on Share point
- Participate in the MDC Conference Day 2007
- Continue to share reading resources, best practices, thematic instructional strategies, and emerging technological sites and software via Share point.
- Participate and encourage new faculty to attend the upcoming Winter and Summer Institute 2007
- Assist in planning and promoting the Winter Institute 2007
- Promote and invite a non-math faculty to the 2007 Math Retreat
- Assist in creating linkages to other disciplines
- Organize and promote Math and/or Science and other discipline "lunch bunches" for faculty to interact ,sharing and discussions
- Showcase successful Learning Communities College-Wide
- Provide an Orientation for Adjuncts and new faculty
- Work on more visibility, (i.e. talk to campus advisors, students newspaper, provide an adjunct training, get input from faculty)
- Survey faculty (Flashlight)

"From whence does algebra grow? It grows from the study of growth itself. "

-Dossey, J. 1997. "Making Algebra Dynamic and Motivating: A National Challenge."