

*QEP Development Committee*

*March 14, 2012*

*10:00AM*

*Mackey 101*

**Members Present:** Judy Bivens, David Caldwell, Randy Carden, Whitney Casey, Joe Cole, Michael Jackson, Mike Leih, Doug Lepter, Tom Middendorf, Alisha Russell, Donna Tudor, Lena Welch, Steve Pusey, Riley Wampler, Matthew Murdock, Bari Watson

**Members Absent:** Carol Maxson, Suzie Harris (Faculty Development Meeting)

- Joe Cole opened in prayer.
- Dr. Pusey reminded the committee of Dr. Williams' (SACSCOC liaison) visit to campus this Monday, March 19th. She will be in the all-employee meeting at 10AM to give a brief SACSCOC overview. She will also be meeting with the QEP Leadership Committee that afternoon.
- Best Practices discussion – **see attachment A**
  - Donna Tudor -- Samford & TN Tech
    - *Arts and Sciences Program for Independent Research (ASPIRE)*
    - *URECA (Undergraduate Research and Creative Activity)*
    - **see attachment B**
  - Randy Carden -- Hope College
    - *Summer Hope Academic Research Program (SHARP)*
    - Heavy in sciences
    - Lacks the creative aspect
    - 3 pages of topic options
    - Has a web portal for application, then information is sent to departments
  - Alisha Russell -- Austin Peay
    - Comprehensive program for creative endeavors
    - From full-length ballet to painting endeavors
  - Alisha Russell -- James Madison, Vanderbilt
    - Department-specific
    - Research endeavors are part of tenure and promotion
    - Willing to share assessment criteria, if cited
    - Not an ideal example
  - Matt Murdock -- UAB & Marymount
    - *Office of Undergrad Research (OUR)*
      - heavy in Chemistry, other sciences
    - *DISCOVER*
    - Marymount had an undergraduate research QEP topic that was driven by an alumni survey. 11% found research component made them better prepared for their career.
    - **see attachment C**
  - Judy Bivens -- Winthrop

- Coordinating and enhancing undergraduate research scholarship & creative activities across campus
  - Tom Middendorf -- Union College
    - Undergraduate research focus for 25+ years
    - Approx. same size as Trevecca
    - Over 50% of seniors involved in research program
    - Offers 4-week or 8-week summer program
    - Grants available
    - 49% sciences
  - Mike Jackson -- Elon
    - *Spring Undergrad Research Forum* - faculty & students present research
    - *Summer Undergrad Research Experiences (SURE)* - 8 weeks long
    - *Undergraduate Research Journal* - focuses on scholarship about undergrad research
    - Council of faculty members from different disciplines (yearly rotation) that serves as an advisory committee
  - Doug Lepter – University of Kentucky
    - *Experiences in Undergraduate Research and Kreative Activities (eUreKa!)*
    - Official office with paid staff whose sole responsibility is to match mentors & mentees, track & follow-up on relationship and project follow-through
  - General Findings
    - Some schools allow only one award per department (i.e. Samford)
    - Some schools took a faculty member with a particular interest in undergraduate research, cut teaching load, and made them director of research program (i.e. Belmont)
    - Most institutions have a centralized office for undergraduate research
    - Smaller schools have research programs under the Office of the Provost/Academic Affairs
    - In many programs, faculty in each department had some control over or say in program entrance
    - Matt Murdock noted that heritage/tradition of the denomination are included as a component of the QEP at most religious-affiliated schools
- Committee members should email their Best Practices information/findings to Lena. She will compile and post on the Institutional Research Wiki site.
- Lena urged committee members to form informal groups (3-4 people) to meet, go to lunch together, etc. and begin envisioning what an undergraduate research & creative endeavors program would look like at Trevecca. Members should use “Our First Task” handout as a guide, but don’t let it limit you. Get input from people outside the committee, if you wish. Send ideas to Lena by Friday, April 13<sup>th</sup>. She will circulate to other members and we will discuss at our April 16<sup>th</sup> meeting.
- Lena reminded members to keep in mind that the QEP doesn't have to be implemented “full-scale” the first year. It can start small (i.e. only in sciences, only a summer program, etc.) and then gradually grow, becoming more inclusive.

- Developing Student Learning Outcomes – ***see attachment D***
  - We need to develop student learning outcomes in order to drive the committee in informal discussions.
  - Donna Tudor mentioned that it is helpful to link Student Learning Outcomes (SLOs) to TNU institutional goals, mission, statement of purpose, etc. SLOs should be clearly stated (few *ands*, connectors, etc.). They shouldn't be too complicated.
  - Judy Bivens noted that the SLOs from the handout seemed to lack a focus on creativity, which we should try to include.
  - Randy Carden proposed that members submit their draft SLOs to Lena. At the next meeting, we can sift through the pile, form clusters, and refine.
  - Doug Lepter observed that many of the schools researched included some sort of collaboration, mentor/mentee relationship, apprenticeship, etc.
  - Tom Middendorf said that his research has shown apprenticeships or 1-1 mentorships to be more effective than teams.
  - Randy Carden explained that several articles (publication-in-process) have come out of his undergraduate research classes. Perhaps we will see several different levels of operation.
  - Alisha Russell expressed her appreciation for those programs in which departments have some say. Programs can look different across disciplines (i.e. Randy's Psychology classes vs. Alisha's Biology classes).
- Lena & Dr. Pusey noted that there is an understanding that financial, personnel, other resources will be necessary for QEP implementation. However, we must be good stewards and ask questions like, "Do we want to invest funds into a full/part-time position or would we rather put them into student scholarships? We should also be thinking of creative ways to raise money.
- Alisha Russell mentioned that science/math can probably receive more federal funds or grants than what we are currently receiving. She referred questions to Chris Farrell.
- At the conclusion of the meeting, Lena reminded QEP members of their "assignments":
  - **Over the next week**, members should send their Student Learning Outcome ideas to Lena via email. These ideas do not have to go by the guide; members can develop them on their own.
  - Members should informally connect/partner up to intentionally think about how the QEP will look at TNU. Questions from "Our First Task" handout can be used as a guide. Notes should be sent to Lena **by Friday 4/13**.
  - Information about other schools' research programs should be sent to Lena to be posted on the Institutional Research wiki site.
- Meeting adjourned at 11:05AM.

Whitney Casey  
Secretary

## Attachment A

### **Our first task: Learning more about other institutions' undergraduate research programs**

Name of Program:

School:

Contact information & how contacted:

Focus ("traditional" research, creative/artistic scholarship, or both):

Requirements for admission into program (institutional? department/program?):

Preparing students for conducting research (coursework, mentoring, teamwork, etc.):

Benefits/rewards to students (scholarship money, travel/conference expenses, academic credit, graduation honors, etc.):

Faculty compensation (release time/overload/additional professional development money, etc.):

Support/administrative staff/structure:

Celebrating/promoting research/scholarship:

Assessment methods:

Information on grants for undergraduate research?

If program was part of a QEP, how did they market or promote it?

Unique features of program:

Piece of advice for institution starting an undergrad research program or what they might do differently if beginning a program now?

## Attachment B

**From:** Tudor, Donna

**Sent:** Tuesday, March 13, 2012 11:09 PM

**To:** Casey, Whitney ; Bivens, Judy; Caldwell, David; Carden, Randy; Cole, Joe ; Harris, Suzie; Jackson, Michael D; Leih, Mike ; Lepter, Doug; Maxson, Carol; Middendorf, Thomas ; Murdock, Matthew ; Pusey, Steve; Russell, Alisha ; Wampler, John R; Watson, Bari ; Welch, Lena

**Subject:** QEP Assignment - UGrad research programs

QEP Development Committee,

The following universities provided information regarding undergraduate research programs at their institutions:

1. Samford University - ASPIRE (The Arts & Sciences Program for Independent Research) - a one-on-one guided research experience where a student invests a summer working with a Samford professor on a research topic. The website provides details regarding contribution to students' learning and funding as well as application forms.

[www.samford.edu](http://www.samford.edu) (Home/Programs/Undergraduate Research)

Dr. G. Martin has been contacted but is out of town at this time.

2. Tennessee Tech University - URECA (Undergraduate Research and Creative Activity) - academic year mini-grants, summer grants with stipends, and travel grants for students and their accompanying faculty mentors.

The website provides details regarding funding and application process.

[www.tntech.edu/research/ureca-program/](http://www.tntech.edu/research/ureca-program/)

3. Rhodes College - Rhodes Fellowships - various fellowship options including outside study/study abroad/ research/creative activity/internships/civic engagement. The website provides more details...

[www.rhodes.edu/academics](http://www.rhodes.edu/academics) (Fellowships & experiential learning)

Dr. Garner has been contacted and will be providing more information in a few weeks.

4. Maryville College - Senior Study: The Undergraduate Research and Creative Expression Program - Contact - Dr. Mardi Craig (See Catalog)

5. Other schools in Tennessee that have responded or have been referred include:

Martin Methodist College - Contact - Dennis Haskins

MTSU

APSU

## Attachment C

### Our first task: Learning more about other institutions' undergraduate research programs

#### Name of Program:

1. Office for Undergraduate Research The Office for Undergraduate Research (OUR) is a one-stop clearinghouse for undergraduate research. We promote and facilitate research, scholarship and creative activities by undergraduate students across all disciplines at UAB. The Office provides information and tools necessary to educate undergraduate students about research, help them find and engage in fulfilling research opportunities, and assist students in communicating their findings. We work closely with faculty to support ongoing undergraduate research efforts, as well as to assist those interested in adopting a research pedagogy and/or serving as a mentor.

OUR's primary goal is to increase the level of undergraduate research activity at UAB, whether conducted by the hard sciences or by the creative arts or occurring in the lab or on the stage. This activity may come in the following forms:

- Discovery e.g. sciences, creative arts
- Integration e.g. interdisciplinary studies
- Application e.g. engineering applications, community-based research
- Teaching e.g. education

We believe research prepares students for the complexities of the real world by providing a hands-on learning experience in current thought-provoking settings. Research not only stimulates and sharpens problem-solving and communication skills, but immerses students in cutting-edge investigation and scholarship. OUR is committed to engaging students in an enriched learning environment, whereby they develop the necessary skills for academic and professional success.

#### 2. Chemistry Department

#### 3. Summer on and off campus opportunities

<http://www.uab.edu/undergraduateresearch/>

School: University of Alabama – Birmingham

#### Contact information & how contacted:

For general questions about the program please contact Dr. Christopher W. Reaves at [cwreaves@uab.edu](mailto:cwreaves@uab.edu).

<http://www.uab.edu/home/research>

#### Focus ("traditional" research, creative/artistic scholarship, or both):

Dept. of Chemistry, BS Degree

#### Requirements for admission into program (institutional? department/program?):

Dept. of Chemistry, BS Degree: Submit form: Procedures, Equipment, Topic, Semesters. Departmental Approval

<http://www.uab.edu/chemistry/additional-informationb>

#### Summer Research Programs for Undergraduates: 6 Programs each with a coordinator

<http://www.uab.edu/graduate/researchg/summer-research-programs-for-undergraduates>

1. Prep Scholar's Program
2. Post-Baccalaureate Achievement Program
3. Physics

4. Neurobiology
5. Genetics
6. Biomedical Science

**Preparing students for conducting research (coursework, mentoring, teamwork, etc.):**

Links to websites: WebGuru, ResearchMatch.org, Reinvention Center (Univ. of Miami), CUR – Council on Undergraduate Research

<http://www.uab.edu/graduate/researchg/summer-research-programs-for-undergraduates/320-summer-research-at-other-places>.

Summer Off Campus research, 10 week fellowships, 5 programs. Observe or participate in the process science news is reported. Assigned to radio station, television station, newspapers, magazines

1. Experimental and Computational Materials Research
2. Prep Research Experience in Pathology (PREP)
3. Neurobiology
4. Genetics
5. Biomedical Science

**Benefits/rewards to students (scholarship money, travel/conference expenses, academic credit, graduation honors, etc.):**

Chemistry supported by local grants

**Faculty compensation (release time/overload/additional professional development money, etc.):**

**Support/administrative staff/structure: Coordinators**

**Celebrating/promoting research/scholarship:**

Websites, UAB Expo, Poster sessions, 5<sup>th</sup> annual, last year over 180 applicants with over 400 in attendance

**Assessment methods:**

**Information on grants for undergraduate research?**

On website

**If program was part of a QEP, how did they market or promote it?**

**Unique features of program:**

**Piece of advice for institution starting an undergrad research program or what they might do differently if beginning a program now?**

**Our first task: Learning more about other institutions' undergraduate research programs**

**Name of Program:** Discover: Inquiry, Scholarship, Creativity, Research

Marymount's DISCOVER Center coordinates the Office of Undergraduate Research, the First-Year Experience classes, the annual Student Research Conference, student conference travel support, and the Summer Research Program for students and faculty mentors.

**School:** Marymount University (VA)

**Contact information & how contacted:**

The Discover Center

Phone: (703) 284-5761

E-mail: [discover@marymount.edu](mailto:discover@marymount.edu)

YouTube video link to webpage, @ 8 min.

<http://www.marymount.edu/academics/discover>

**Focus ("traditional" research, creative/artistic scholarship, or both):**

**Requirements for admission into program (institutional? department/program?):**

Submit Form

**Preparing students for conducting research (coursework, mentoring, teamwork, etc.):**

Pairing faculty and students in research

Resources for Students: IRB process, MU Library – Reference Works, MU Library – Research Tips, Web GURU, Council on Undergraduate Research

**Benefits/rewards to students (scholarship money, travel/conference expenses, academic credit, graduation honors, etc.):**

Grant, credit

**Faculty compensation (release time/overload/additional professional development money, etc.):**

Grant

**Support/administrative staff/structure:**

**Celebrating/promoting research/scholarship:**

The Student Research Conference is an opportunity to showcase your scholarly collaboration with faculty to the University community. It is an excellent way to demonstrate your research skills, readiness for advanced study, and preparedness for a profession. This highly anticipated event takes place this year on April 18.

Participants can make oral (15 min), poster, or visual arts presentation.

**Assessment methods:**

**Information on grants for undergraduate research?**

The DISCOVER Center will fund up to 15 student research grants this summer for faculty mentors working with students on a research project or creative endeavor. Both students and faculty receive a stipend for funded projects.

If program was part of a QEP, how did they market or promote it?

The impact of participating in independent research projects is also witnessed by a relationship to the institutional contribution to personal growth and development. Those alumni who participated in research projects are more likely to indicate that their Marymount education contributed to development of leadership skills, openness to new experiences, and self-confidence.

**Unique features of program:**

Piece of advice for institution starting an undergrad research program or what they might do differently if beginning a program now?



## Laying the Foundation for Success: Piloting, Assessing, and Improving the QEP

**Liane Summerfield**

*Associate Vice President for Academic Affairs*

**Michael Schuchert**

*Executive Director, Institutional Effectiveness*

**Carolyn Oxenford**

*Director, Center for Teaching Excellence*

## Overview of the QEP

Undergraduate Research  
Program

Summer Research Program

Student Research  
Conference

Inquiry learning in the  
majors

DSC 101 First-Year Seminar

**discOver**  
inquiry scholarship creativity research

## DSC 101 First Year Seminar

- 3-credit course, piloted fall 2008 (4 sections) and 2009 (10 sections)
- In fall 2010 fully replaces SEM 101, 1-credit Freshman Seminar
- DSC 101, taught by full-time faculty or experienced adjuncts
  - Foundation for research, inquiry-guided learning, creative activities
  - Faculty choose theme; common objectives

## DSC 101 Learning Outcomes

By the end of the first year experience, students are able to:

- Formulate a research question
- Conduct basic literature search in support of a research question
- Outline divergent approaches to examine a research question
- Describe potential ethical issues related to research methodologies

### Other DSC 101 Outcomes

**Attitude Outcome:**

- By the end of the first year experience, students will have increased confidence in their academic abilities, particularly inquiry.

**Institutional Outcomes:**

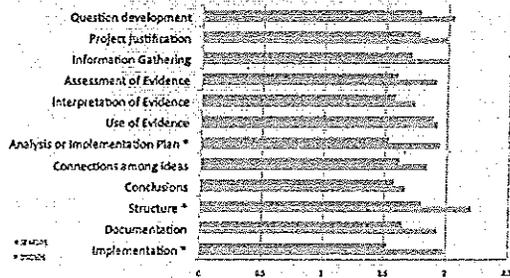
- As a result of the first year experience:
- Students will be more engaged in the Marymount community
  - Students will be retained at higher levels

### Student Inquiry Skills and Attitudes Questionnaire (Indirect)

The results indicated consistently and significantly higher scores for students enrolled in DSC 101 compared to those in SEM101 with the exception of:

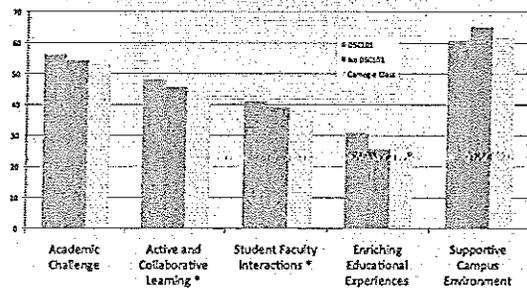
- Participating in inquiry with others
- Applying inquiry to their lives
- Enjoying the inquiry process

### Results from the Discover Assessment Workshop (Direct)



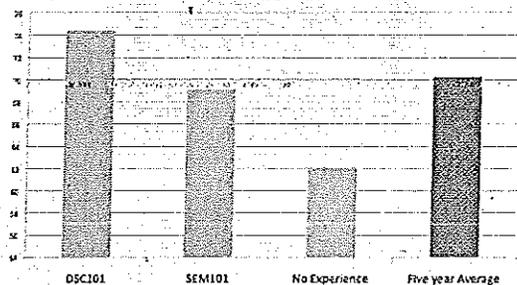
\* Denotes statistically significant difference between DSC101 and SEM101 Student

### National Survey of Student Engagement (Comparison)



\* Denotes statistically significant relationship between all Marymount students and Carnegie Class

### 2008 to 2009 Retention Rates (Administrative)



### Feedback from Pilot Faculty

The four faculty who taught the pilot sections requested additional support in these areas:

- Developing inquiry learning pedagogy
- A model syllabus with required elements
- Using the required assessment tools
- Working with peer mentors
- Helping students understand inquiry goals and getting more student "buy-in"

### Spring Workshop

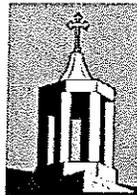
- What is an inquiry course?
- Engaging students
- DSC 101 Details
  - Model syllabus and course outcomes (revised)
  - Course planning map
  - Peer mentors and budget
- DSC 101 Assessment Tools
  - Discover Assessment Tool (DAT), Student Inquiry Skills & Attitudes Questionnaire (SISAQ)

### Summer Workshop

- Introduction & Icebreakers
- First Year Students: Cultural and Developmental realities of first year students
- The DAT and Designing effective individual assignments
- Career portfolio
- Designing and Assessing Effective Group Assignments
- Fitting the pieces together
- Grading and DISCOVER

## Improvements

- DAT and SISAQ Revisions
- Changes in peer mentor training and assignment
- Addition of staff mentors to some DSC 101 sections to improve sense of campus support
- Developed career portfolio using campus career center resources to connect students to this service



**Contact us:**

[liane.summerfield@marymount.edu](mailto:liane.summerfield@marymount.edu)

[michael.schuchert@marymount.edu](mailto:michael.schuchert@marymount.edu)

[carolyn.oxenford@marymount.edu](mailto:carolyn.oxenford@marymount.edu)

## Attachment D

### Developing SLOs (Student Learning Outcomes) for Trevecca's QEP (Undergraduate Research & Creative Endeavors):

#### Suggestions From Final White Paper #3:

“The following specific student learning outcomes are suggested in the undergraduate research initiative. Upon completion of the undergraduate research initiative, successful students will be able to:

- SLO1 demonstrate awareness of scholarship topics in their discipline and will be able to articulate those topics at the level of undergraduate preparation. (Trevecca institutional goal #9; QEP topics: student research, academic rigor)
- SLO2: acquire and demonstrate skills, including ethical decision-making, related to conducting scholarship in their discipline. (Trevecca institutional goals #8 and #9; QEP topics: student research, critical thinking)
- SLO3: articulate their research findings or scholarship through written and/or oral presentations. (Trevecca institutional goal #5; QEP topics: communication; student research)
- SLO4: engage in self-reflection of their own work, facilitated by their faculty mentor and feedback from oral and/or written presentations of their work. (Trevecca institutional goal #6; QEP topics: critical thinking, academic rigor)
- SLO5: become familiar with the creative and research processes in other disciplines. (Trevecca institutional goal #6 and #8; QEP topics: critical thinking; student research).”

#### Suggestions from Final White Paper #1:

“The main goal of teaching is to enable as much learning as possible. It has been postulated that learning comes from taking part in a variety of activities specifically designed to allow the engaged student to learn (1). Establishing honors research would allow us to provide a much wider range of experiences to our students and thus greater learning especially in the realm of critical thinking (2, 3).”

“Undergraduate research has been shown to result in critical thinking skills and to increase many aspects of student learning. Students who participate in research are engaged in active learning and tend to develop into deep rather than surface learners.”

“Along the same lines, students who conduct undergraduate research demonstrate enhanced epistemological reflection. . . . In other words, students are better able to evaluate information and apply it appropriately. Undergraduate researchers are better able to frame questions, obtain needed data, attack problems and communicate to others.”

Also from White Paper #1:

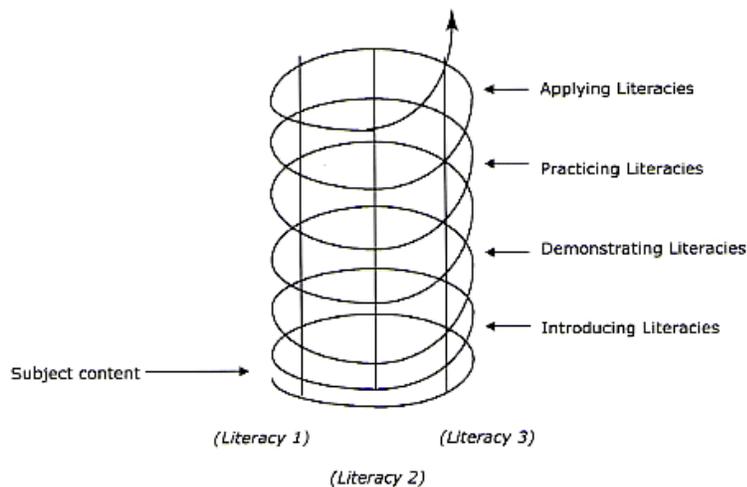


Figure 1. A visual representation of Burner's Spiral Curriculum with 3 core concepts which are systematically reinforced as the students increase in their knowledge of the subject. From the University of Wyoming. (<http://uwacadweb.uwyo.edu/CLAAS/Old%stuff/bigspiral.jpg>).

Suggestions from Final White Paper #2:

“L. Dee Fink, author of *Creating Significant Learning Experiences*, in speaking about the problems of defining “critical thinking” refers to “Robert Sternberg's 'triarchic' view of thinking.” Fink defines Sternberg's approach:

He [Sternberg] sees *thinking* as a general concept and then identifies three distinct subcategories: critical thinking, creative thinking, and practical thinking. My [Fink] own translation of this view makes the following distinction among these three kinds of thinking. *Critical thinking*, the term invoked most widely in higher education, has a specific meaning in Sternberg's triarchic view. Here it refers to the process of analyzing and evaluating something; hence criteria play an especially important role. *Creative thinking* occurs when one imagines and creates a new idea, design, or product; in these instances, novelty and 'fit with the context' play a key role. *Practical thinking* occurs when a person is learning how to use and apply something, as when trying to solve a problem or make a decision. The product of this kind of thinking is a solution to a decision, and the effectiveness of the solution or decision is paramount. The use of case studies in business schools is a good example of promoting practical thinking; students are generally learning how to solve problems and make decisions. (39-40)”

## **Developing Institutional Goals for Trevecca's QEP (Undergrad Research & Creative Endeavors)**

### Suggestions from Final White Paper #3:

“The initiative consists of five goals: (1) contribute wide-spread coordination and administrative support to existing and future research endeavors, (2) promote an interest in research at the freshman and sophomore levels, (3) champion grant-writing efforts and corporate support for faculty/student research, (4) advocate recognition and compensation for both students and faculty, and (5) develop additional means for sharing or publishing the student research.”

### Suggestions from Final White Paper #1 (Not exactly SLOs but possibly institutional goals?)

“Conducting research can help faculty to stay up to date and provides them with current examples to use in lecture courses (4).

“They (*student researchers*) also exhibit higher levels of self-confidence and independence”

“ . . . studies indicate that students who do not conduct research will still benefit from having these students in the classroom and in peer-tutoring situations such as those provided at the CLCS and during LEAP (*i.e., benefits larger academic climate*)”