
2012-2013 Distinction through Discovery Update (Pre-year 1)

Following a successful SACS/QEP site visit in February of 2013, FAU's faculty, students and staff planned the first full year of Distinction through Discovery (DTD) implementation, for the academic year 2013-2014. Four committees were deemed essential to the success of the initiative; the Curriculum Committee, Co-Curricular Committee, Marketing Committee and the Assessment Committee.

In review of the progress made in pre-year 1 (2012-2013) the four goals of the Distinction for Discovery plan served to guide evaluation:

Distinction through Discovery Goals:

- Goal 1 Establish an Undergraduate Research and Inquiry (URI) Rich Curriculum
- Goal 2 Expand Co-curricular URI Opportunities
- Goal 3 Increase Support and Recognition for Faculty and Students Engaged in URI
- Goal 4 Enrich and Strengthen URI Culture and Climate

Goal 1: Establish an Undergraduate Research and Inquiry (URI) Rich Curriculum

1. 2012-2013: Pilot Curriculum Grant Programs

Three pilot honors in the major programs were supported to pilot the partnership between programs and the QEP for integrating research and inquiry into the curriculum. They included:

- Biology (Science)
- Political Science (Arts and Letters)
- Accounting (Business)

Assessment Summary Goal 1:

a) Undergraduate Courses impacted by the QEP = 6

- ACG 3131
- ACG 3341
- ACG 4401
- BSC 4917
- BSC 4918
- POS 4931

b) Student Learning Outcomes Assessment:

Within the URI enhanced curriculum, Student Learning Outcomes (SLO) were measured during the pre-year 1 Pilot Programs. Table 1 provides a curriculum map of the Pilot Programs in regard to direct measures of student performance across all six student learning outcomes in the 6 courses.

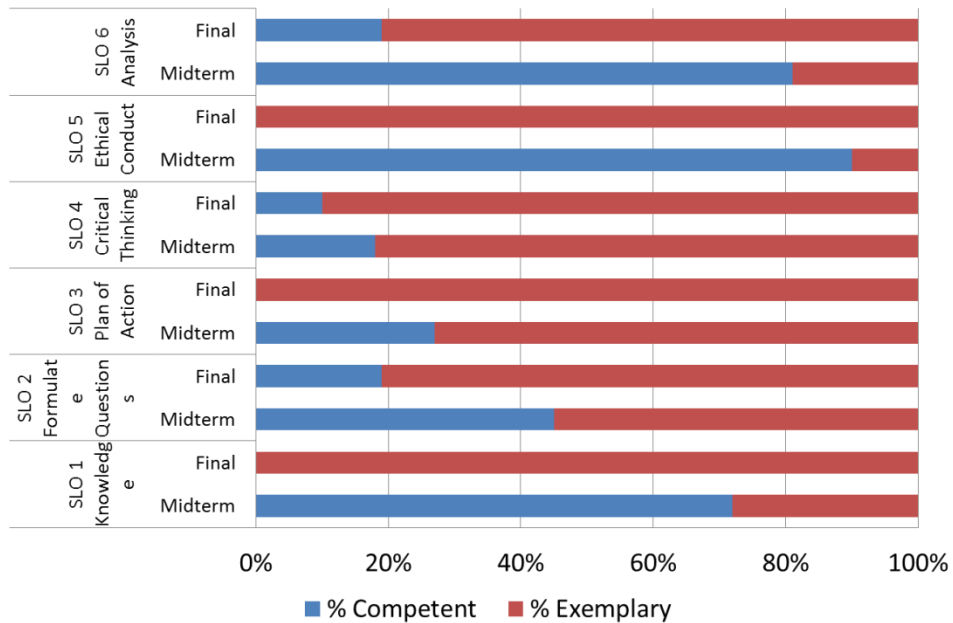
Table 1: Pilot Program Student Learning Outcomes, by course

| SLO | ACG 3131 | ACG 3341 | ACG 4401 | BSC 4917 | BSC 4918 | POS 4931 |
|-----------------------|----------|----------|----------|----------|----------|----------|
| 1-Knowledge | x | | x | x | x | x |
| 2-Formulate Questions | | x | | x | x | x |
| 3-Plan of Action | | x | x | x | | x |
| 4-Critical Thinking | | x | x | | | x |
| 5-Ethical Conduct | | | | | | x |
| 6- Communication | x | x | x | | x | x |

Source: DTD OURI Assessment Data File

Pilot program awardees were asked to use curriculum mapping to evaluate where research and inquiry skills (6 QEP learning outcomes) were being implemented in their curriculum and identify where they could be measured. Preliminary data show improvements in student learning through the courses and programs can be seen in Figure 1.

Figure 1: SLO Change in Political Science Pilot Program During the Spring 2013 Term



Source: DTD OURI Assessment Data File

c) Focus Group with Pilot curriculum Grant Program Faculty

As an indirect measure of Goal 1 Curriculum, a focus group interview of the DTD Pilot Program faculty was employed, to identify areas of improvements and readiness of programs collaborating with the QEP. The data summary from this focus group is shared in Table 2.

Table 2: Pre-year 1 Pilot Focus Group Data

| Theme | Noted Elements |
|------------------------|--|
| Planning Time | map what students will learn |
| | customize a rubric to an assignment |
| Integrating URI | need for flow of skills |
| | learner readiness |
| Assessment | value of formative assessments |
| | professional development essential |
| Curriculum | mapping the curriculum |
| | SLO direct examples |
| | matching faculty to Course and URI needs |
| Support Needed | shared best practices |
| | assessment and rubrics |
| | developing evaluation rubrics |

Source: DTD OURI Assessment Data File

2. Pilot Freshman Learning Community Programs

In 2012, instructors teaching in the learning community program were recruited to pilot integrating research exposure and skill building elements into their SLS 1503 course.

a) Undergraduate FLC Courses impacted by the QEP = 8

- i. Science Living Learning Community (LLC)
- ii. Biology FLC
- iii. Engineering LLC (x2)
- iv. Honors FLC
- v. Education FLC
- vi. Psychology FLC
- vii. Visual arts FLC

b) Focus Group with Pilot Freshman Learning Community Instructors

Indirect measures related to Freshman Learning Community pre-pilot focus group session will serve to guide the implementation of lower division undergraduate initiatives beginning in year 3. This data is shared in Table 3.

Table 3: FrLC pre-pilot Focus Group Data

| Theme | Noted Elements |
|--|--|
| Course-based Assignments | Questions to explore and the development of a research question were used |
| | Project based assignments |
| Faculty Role Shift | Teacher as mentor/coach |
| | Student learning and engagement improved |
| Enhanced Partnerships | Discipline specific and community partnerships |
| | Undergrad/grad, underclassman/upperclassmen partnerships emerged |
| Student Learning Outcomes | Awareness of travel grants, research grants, publication possibilities |
| | Content knowledge, student products (deliverables) enhanced |
| | Culture of service emphasized |
| | Students better able to find information, and discriminate information sources |
| Suggestions for successful SLS implementation | Have students engage in their own interests |
| | Interdisciplinary research between departments would be ideal |
| | Take advantage of Library resources, training and guidance |
| | Plan to assess; a rubric approach would have enhanced the pilot |

Source: DTD OURI Assessment Data File

Goal 2: Expand Co-curricular URI Opportunities

Co-curricular URI expansion is planned as a scaffolded increase in opportunities for students. The plan over four academic years provides evidence of intended enrichment, demonstrated in Table 4.

Table 4: Co-curricular URI Opportunities. **Red indicates newly launched initiatives**

| 2011 | 2012 | 2013 | 2014 |
|---|--|---|--|
| <ul style="list-style-type: none"> Undergraduate Research Grants Undergraduate Research Symposium | <ul style="list-style-type: none"> Undergraduate Research Grants Undergraduate Research Symposium Undergraduate Research Journal | <ul style="list-style-type: none"> Undergraduate Research Grants Undergraduate Research Symposium Undergraduate Research Journal Collaborative regional conference Soliciting external funds | <ul style="list-style-type: none"> Undergraduate Research Grants Undergraduate Research Symposium Undergraduate Research Journal Collaborative regional conference Soliciting external funds Summer Undergraduate Research Fellowship |

Source: DTD OURI Assessment Data File

Direct measures of expanded co-curricular opportunities include increases in undergraduate research grants, undergraduate research symposium presenters and undergraduate research journal submissions.

1. Undergraduate Research Grants

FAU offers a grant program for students who are engaged in research to apply for funds to support their projects.

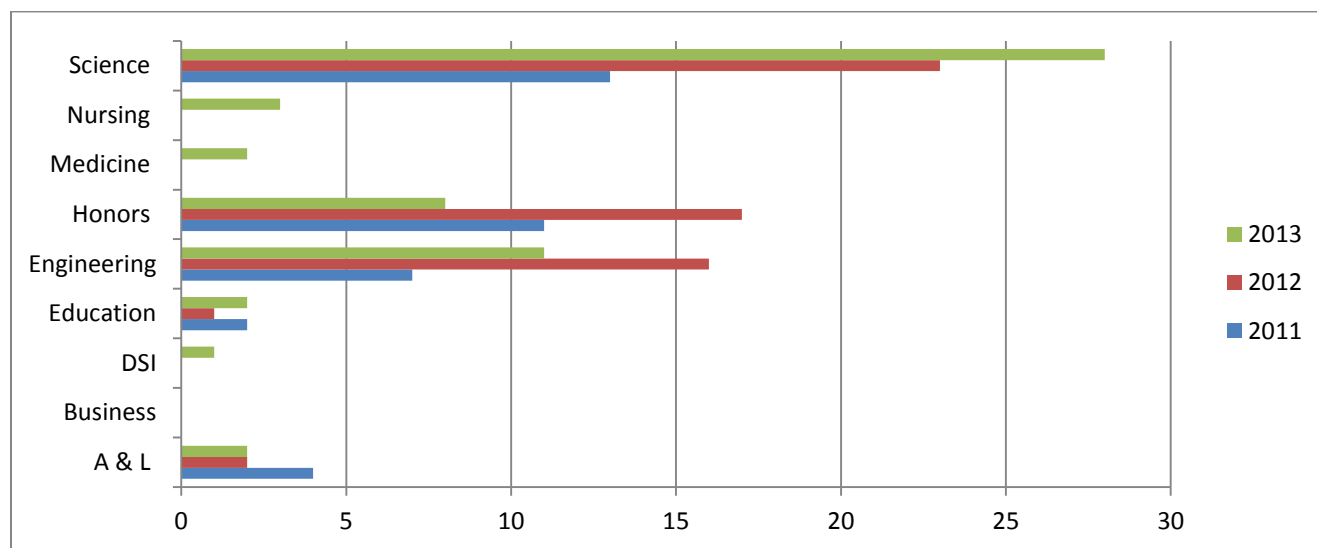
a) # Undergraduate Grants Awarded by the QEP

- 2011-2012: 37 grants awarded
- 2012-2013: 57 grants awarded

b) Broad Based Participation by college

The co-curricular committee identified a need to increase opportunities across all colleges, for all students to have an opportunity to engage. Figure 2 demonstrate this growth.

Figure 2: UG Research Grants distribution by college



Source: DTD OURI Data File

c) Process for review of Grants submitted for funding

An informal process for reviewing grant applications was being used. It involved preliminary review by the QEP Director and the Dean of Undergraduate Studies.

2. Undergraduate Research Symposium:

FAU hosts an Annual Undergraduate Research Symposium on the Boca Campus, where students can showcase their project findings.

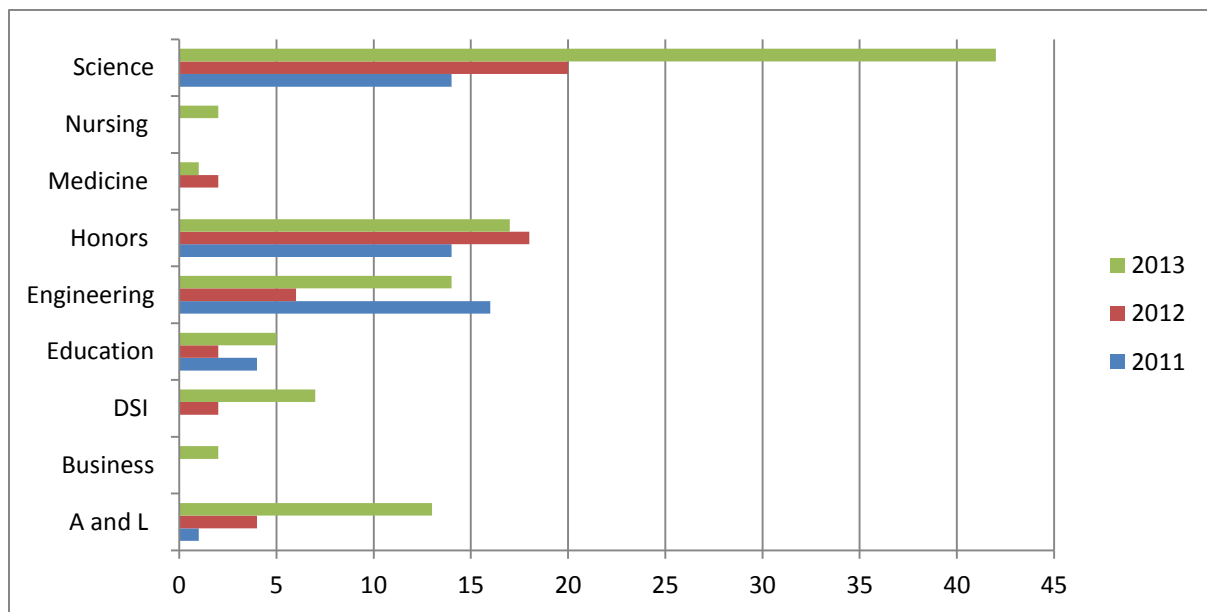
a) # Undergraduate Research Symposium presenters

- 2010-2011: 49 student presenters
- 2011-2012: 54 student presenters
- 2012-2013: 103 student presenters

b) Broad Based Participation by college

In addition to increasing student participation at the symposium, broad based participation of students across all colleges is an additional assessment measure. Figure 4 displays data relevant to the increase in diversity of undergraduate research symposium presenters. As in the research grants, above, the representation across all colleges is a valuable measure of growth in this area.

Figure 3: UG Research Symposium Presenters, by college



Source: DTD OURI Data File

c) Improvements in the Undergraduate Research Symposium for 2013.

In addition to providing an opportunity for students to present, our efforts have also been on improving the quality of the symposium and tailoring the experience to be consistent with other regional and national conferences. The following improvements were made for the 2013 Symposium.

- Presentation by a keynote speaker – Daniel Cane from Modernizing medicine
- Formalized judging of both student oral and poster sessions using a rubric
- Prizes awarded by college for first, second and third place winners
- New Awards reception hosted with dinner at the end of event
- Tracking attendees: 260 faculty, staff and student attendees

3. Undergraduate Research Journal:

In 2012, FAU launched the first edition of the Florida Atlantic Undergraduate Research Journal (FAURJ). Two volumes are published each year.

a) # Undergraduate Students who submitted manuscripts

- 24 student submissions

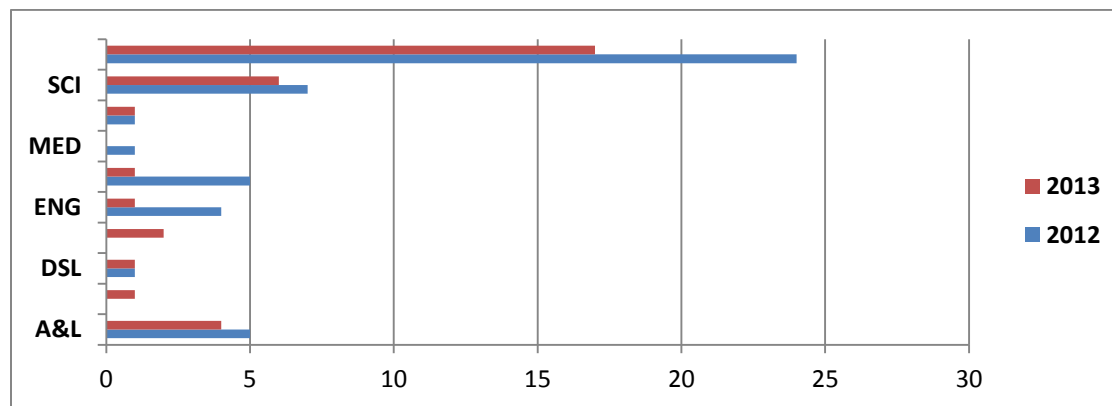
b) # Undergraduate Students published

- Volume 1: 6 manuscripts
- Volume 2: 2 manuscripts
- Total published = 8

c) Broad Based Participation by college

Figure 4 provides distribution of the submissions by college.

Figure 4: Undergraduate Research Journal Submissions



Source: DTD OURI Assessment Data File

4. Student Participation in Regional and National Conferences

Quantifying # of students participating in regional and national conferences continues to be a challenge. The following are measures we can directly assess.

a) # Undergraduate Students funded through Student Government Travel to present at an academic conference

- 36 (estimated → no formal mechanism for quantifying these numbers)

In 2013, the QEP Director served on the organizing committee of the 1st Annual Life Sciences South Florida (LSSF) STEM Research Symposium held in March 2013.

b) # FAU participants at the LSSF STEM Symposium

- # FAU student presenters: 11
- # FAU faculty judges: 4
- # FAU Student Awards: 2 (first and second place poster awards)

Goal 3: Increase Support and Recognition for Faculty and Students Engaged in URI

The QEP program provides a variety of faculty and student support and recognition for undergraduate research and inquiry.

1. QEP focused Faculty Learning Communities:

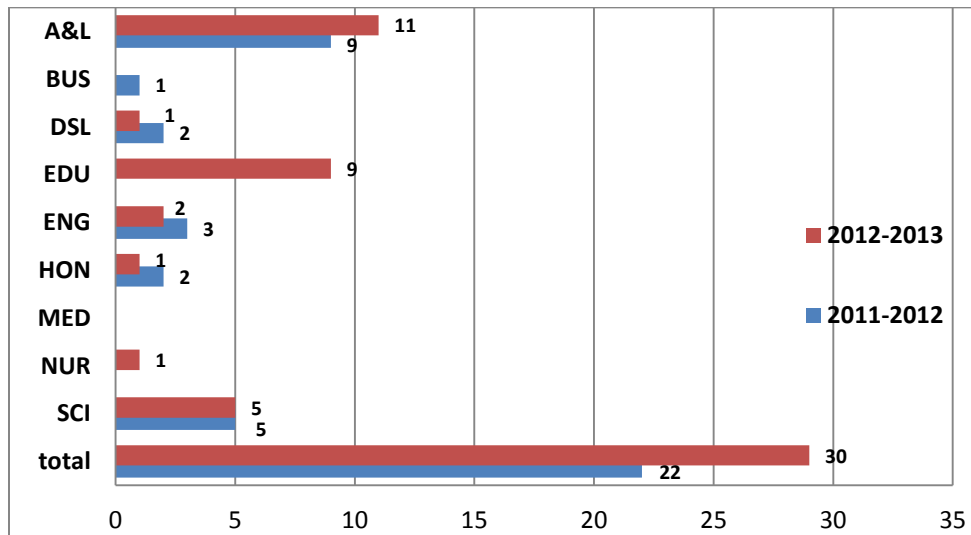
a) # of Faculty participating in QEP Focused FLC's

As a direct measure, QEP-focused Faculty Learning Communities (FLC) provides evidence of growth.

- 2011-12, two FLC groups engaged 22 faculty participants
- 2012-13, three FLC groups engaged 30 faculty participants, an increase of 36%.

b) Broad Based Participation by college

Figure 5: Participation in QEP-Focused FLCs, by college



Source: Scholarship of Teaching Office Data File

2. # Faculty presenting/attending the Annual Florida Statewide Symposium- Engagement in Undergraduate Research (University of Central Florida)

- 2010-2011: 1
- 2011-2012: 3 (1 presentation)
- 2012-2013: 4 (2 presentations –oral)

3. Showcasing Students.

Recognizing student successes is one additional priority of our efforts. A few initiatives have been established in 2012. These we intend to be annual events.

a. # Student Research Projects displayed at the University Libraries and Location

- 20 research projects were displayed in the University Libraries
- The display was hosted both on the FAU Boca and Jupiter Campus.

b. # FAU Students whose research projects were highlighted in the Student Spotlight campaign

- 21 students were showcased across the university on websites and bulletin boards as exemplars of actively engaged scholars

4. Council for Scholarship and Inquiry (CSI)

CSI is a student club associated with the QEP. The mission is to promote, provide support and serve as advocates of student researchers. The following are assessments associated with CSI

a. # Student Members to the Council for Scholarship and Inquiry

- 2011-2012: 7
- 2012-2013: 15

b. # Participants at CSI sponsored events.

- CSI hosted a few workshops for students during the Spring 2013 semester. As a new club, participation in those events were limited, totaling 20 for the 2012-2013.

Goal 4: Enrich and Strengthen the URI Culture and Climate.

Enriching and strengthening URI culture and climate at FAU is the Goal 4 focus. Several initiatives were pursued during pre-year 1. These included:

1. Offering University wide membership through the Council for Undergraduate Research *CUR
2. Establishing and sustaining partner programs across the university and campuses.
3. Establishing the Office for Undergraduate Research and Inquiry (OURI)

4. Formalizing DTD Steering Committee membership visit to include
 - representation of all colleges and all partner campuses on the DTD committees
5. Hosting of a series of information and showcase events including
 - QEP kickoff events on all three campuses (October 2012)
 - FAURJ Launch Party (Feb 2013)
 - Boca Research Symposium (April 2013)
 - Annual QEP Summer Retreat (August 2013)

Research and Scholarship within the QEP Initiative

It is important to integrate research and scholarship into the QEP initiative as faculty. Several initiatives have been pursued within the 2012-2013 academic year.

1. External funding

- **NSF Grant targeting transfer students and Undergraduate Research**
 - Collaborative NSF TUES Phase II grant with the Colleges of Science and Engineering in collaboration with University of Central Florida to address STEM retention of Transfer students. Intention to revise and re-submit.

2. Conference Presentations (regionally and nationally)

Two presentations were given on our QEP and Undergraduate Research and Inquiry Efforts. They include († Indicates Invited Presentation)

- a. † **Chamely-Wiik, D.,** Heydet-Kirsch, P., Peluso, J. (2013) “Florida Atlantic University: A Case Study of our Quality Enhancement Plan. Invited talk at the Southern Association of Colleges and Schools, SACS Summer Institute, Daytona Beach, FL.
- b. **Chamely-Wiik, D.,** Peluso, J. (2012) Faculty Learning Communities: (Re) Visioning Undergraduate Curricula to Promote Research and Inquiry. Presented at the *Florida Statewide Symposium: Engagement in Undergraduate Research*, Orlando, FL.

Overall Assessment of the DTD Plan

As part of the QEP DTD Assessment plan, the evaluation of the plan itself was included at the conclusion of the pre-year 1 cycle. An annual retreat served as the format for faculty, students, staff and other stakeholders to review the progress of the pre-year 1 initiative, discuss the needs for the DTD year 1 implementation, and determine specific goals for each DTD committee to pursue. Adequate progress related to benchmarks was discussed among participants grouped according to DTD Committees. Each group presented the findings of their discussion, briefly summarized in Table 5.

Table 5: DTD Benchmark Analysis Summary

| Indicator | Primary Goal Year 1 | First Task |
|---|--|--|
| Goal 1- Curriculum Committee | Certifying courses as research enriched within departments | Identify process for certified courses |
| Goal 1 Evidence of Student Learning (SLO measures) | Use QEP DTD SLOs as measure | |
| Goal 2- Co-Curricular Committee | Short-term: Implement SURF Broaden Partnerships Long-term: Continue to expand participation Plan Research Week | Draft SURF application |
| Goal 2 Evidence of Student Learning (SLO measures) | Integrate SLO measures into URI presentations | |
| Goal 3- Support and Recognition Marketing Committee | Focus recognition and marketing efforts to faculty Begin to develop research opportunities database, by college | Begin planning the faculty retreat/reception for Fall 2013. |
| Goal 3 Evidence of Student Learning (SLO measures) | To be determined Year 1 | |
| Goal 4-Culture and Climate Assessment Committee | Evaluation of co-curricular SLOs Collect information about college and unit specific URI opportunities Add questions to existing surveys Tag list of research-based courses | Develop a way to evaluate student learning for OURI research grant awardees. |
| Goal 4 Evidence of Student Learning (SLO measures) | Develop climate /culture survey related to SLO measures. | |

Source: DTD OURI Assessment Data File

All QEP Annual Retreat participants were given the opportunity to respond to the Annual Retreat Survey. Of the 38 respondents, Table 6 demonstrates participants agreed that the QEP annual retreat highlighted accomplishments, facilitated discussion, and actively engaged participants in the planning process.

Table 6: DTD Annual Retreat Survey

| Question | Mean (n = 38) | Median | Mode | SD |
|--|----------------------|---------------|-------------|-----------|
| The extent to which today's QEP Annual Retreat: | | | | |
| a. Highlighted the QEP's most important accomplishments in the last year. | 4.57 | (5+5)/2= 5 | 5 | 0.97 |
| b. Facilitated discussions about the QEP's goals and successes across all divisions of the University. | 4.40 | (5+5)/2= 5 | 5 | 0.98 |
| c. Allowed you to participate in the process of identifying QEP priorities and action items for the coming year. | 4.63 | (5+5)/2= 5 | 5 | 0.85 |

Source: DTD OURI Assessment Data File

The direct and indirect measures used to assess the pre-year 1 DTD by goal are summarized below.

Table 7: Summary of pre-year 1 Assessment Measures

| | Direct measures | Indirect measures |
|---------------------------------|--|--|
| Goal 1- Curricular | SLO Curriculum Map SLO Pilot courses Honors in the Major Programs Faculty Curriculum Grants | Pre-year 1 Pilot Participant Focus Group Data |
| Goal 2- Co-curricular | UG Research Grants, by college UG Research Symposium Presenters, by college UG Research Journal UGA Supported Student Travel | |
| Goal 3- Support and Recognition | Faculty Learning Communities Faculty Travel Support Council for Scholarship and Inquiry (CSI) Peer Mentors (URI Ambassadors) Student Showcases (Library Display and Student Spotlight) | |
| Goal 4- Culture and Climate | | Freshman Learning Communities pre-pilot Focus Group Data |
| Overall DTD Assessment | Goal Analysis | Annual Retreat Survey Data |

Source: DTD OURI Assessment Data File

Pre Year 1 (Fall 2012- Spring and Summer 2013)

Number of Faculty and Students engaged in undergraduate research and Inquiry

Note: Faculty and student duplication within these numbers is very likely

| Goal 1: Curriculum | | | |
|--|---------------|------------|---------------------------------|
| Curricular | Faculty/Staff | Students | Notes/Source |
| Pilot Curriculum Grant Program (Cohorts, not theses) | 4 | 46 | QEP Cohorts- not graduated |
| Pilot Freshman Learning Community program (Exposure only) | 8 | 221 | registered for QEP focused FRLC |
| Honors in the Major student Theses | | 61 | Honors |
| Wilkes Honors College Students Graduated | | 72 | Honors |
| Engineering Required Senior Design Course | | 351 | Engineering - all departments |
| Total Goal 1 | 12 | 751 | |

Goal 2: Co-Curricular

| Funded Opportunities | Faculty/Staff | Students | Notes/Source |
|---|---------------|------------|-----------------------------------|
| Boca Undergraduate Research Grants Awarded | | 57 | QEP |
| Broward Undergrad Research Grant Awards | | 21 | Broward |
| Students supported by SG travel funds for presenting at conferences/academic competitions | | 36 | Student Affairs (estimated count) |
| HBOI Summer Internship Program | | 10 | |
| Total | | 124 | |

| Other External Opportunities | | | |
|------------------------------|--|-----------|----------------|
| Scripps Internships | | 21 | Honors College |
| Max Planck Internships | | 12 | Honors College |
| Research Park Internships | | 35 | QEP |
| Total | | 68 | |

| Internal Opportunities | | | |
|--|-----------|------------|--------------------|
| Boca Undergraduate Research Symposium Presenters | 65 | 103 | QEP (all colleges) |
| FAU Undergraduate Research Journal submissions | | 24 | QEP |
| Total | 65 | 127 | |

Goal 2: Co-Curricular cont'd

| Regional/National and International Opportunities | | | |
|--|----------|-----------|------------------|
| Life Sciences South Florida Symposium | 4 | 11 | QEP |
| Florida Undergraduate Research Conference student presenters | | 6 | QEP |
| FAU students presenting at FIU Undergraduate Research Panel | | 3 | QEP |
| WHCstudents presenting regionally, nationally, internationally | | 34 | Honors |
| National Model United Nations Model Organization of American States simulation Contest | | 19 | Arts and Letters |
| | | 11 | Arts and Letters |
| Total | 4 | 84 | |

| College Specific | Faculty/Staff | Students | Notes/Source |
|--|---------------|------------|------------------|
| Broward Undergrad Research Symposium Presenters | 15 | 42 | Broward |
| Wilkes Honors College symposium Presenters | | 109 | Jupiter |
| BFA Senior Exhibition | | 42 | Arts and Letters |
| Coastlines undergraduate magazine | | 18 | Arts and Letters |
| Remarque magazine | | 40 | Arts and Letters |
| Examining Public Voice Panel (co-listed at UGR Symp Boca) | | 6 | Arts and Letters |
| FAU Business Plan Competition (undergraduates counted only) | | 40 | Business |
| College of Science Research Symposium (undergraduates) | | 19 | Science |
| College of Educations SAC Conference | | 3 | Education |
| Total | 15 | 319 | |

| | | | |
|---------------------|-----------|------------|--|
| Total Goal 2 | 84 | 722 | |
|---------------------|-----------|------------|--|

Goal 3: Faculty and Student Support and Recognition

| Student Support and Recognition | Faculty/Staff | Students | Notes/Source |
|---|---------------|-----------|--------------|
| QEP Student Spotlight Initiative | | 21 | QEP |
| Undergraduate Research Library Display Council for Scholarship and Inquiry (CSI) student membership | 1 | 15 | QEP |
| Students attending CSI workshops | | 20 | QEP |
| Total | 1 | 76 | |

Goal 3: Faculty and Student Support and Recognition cont'd

| Faculty Support and Recognition | Faculty/Staff | Students | Notes/Source |
|--|---------------|----------|--------------|
| Faculty Learning Communities | 30 | | QEP |
| Florida Undergraduate Research Symposium Faculty Presenters | 4 | | QEP |
| Total | 34 | | |

| | | | |
|---------------------|-----------|-----------|--|
| Total Goal 3 | 35 | 76 | |
|---------------------|-----------|-----------|--|

Goal 4: Culture and Climate

| | Participants (faculty, staff and students) | Notes/Source |
|--|--|--------------|
| QEP Kickoff Events on three campuses (October 2012) | 250 | QEP |
| Memberships on QEP Committees (2013) | 60 | QEP |
| Jupiter Symposium Attendees (April 2013) | 59 | Honors |
| Boca Symposium Attendees (April 2013) | 157 | QEP |
| Annual Summer Retreat Attendees (August 2013) | 65 | QEP |
| FAURJ Reviewers (Fall 2012) | 50 | QEP |
| FAURJ Launch Party Attendees (February 2013) | 193 | QEP |
| Council for Undergraduate Research subscribers (annually) | 339 | QEP |
| Total Goal 4 | 1173 | |