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# FGCUScholars

Improving Writing, Critical Thinking, and  
Information Literacy in the Majors  
at Florida Gulf Coast University

Quality Enhancement Plan

Submitted to the Southern Association of Colleges  
and Schools

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## **Part I. Executive Summary**

Florida Gulf Coast University's next Quality Enhancement Plan, FGCUScholars, will strengthen undergraduate student learning by assisting students in developing stronger writing, critical thinking, and information literacy skills within their majors, ultimately leading to stronger senior capstone projects. FGCU was established with the idea that students would develop as scholars within their disciplines and that their studies would culminate in a scholarly project. Our concept of scholarship is based on an expanded definition of research derived from the Council on Undergraduate Research (CUR); within CUR, undergraduate research is defined as "An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline." The definition of research that derives from the CUR has been expanded at FGCU using Boyer's ideas as proposed in *Scholarship Reconsidered* (1990). In this work, scholarship is defined as "A variety of creative work carried on in a variety of places . . . its integrity measured by the ability to think, communicate, and learn" (15). The senior capstone projects provide students with the opportunity to complete scholarly work within their disciplinary field, including such areas as, to borrow from Boyer, "the scholarship of *discovery*; the scholarship of *integration*; the scholarship of *application*; and the scholarship of *teaching*" (16). As different disciplines engage different kinds of scholarship, each undergraduate program works to develop scholars of their students as appropriate to that discipline and has students demonstrate their learning in the senior capstone course required in every program.

FGCUScholars, our next QEP project, will focus on the skills of writing, critical thinking, and information literacy within the major, creating or refining coursework so that students explicitly develop these skills as they move towards the scholarly project completed in the senior capstone course. Our project responds to a variety of learning outcomes assessments that have been conducted over the last several years at FGCU and to feedback from employers and the needs of post-baccalaureate programs. The concept of students completing a major project in the senior capstone was written into our founding mission statement which explains that undergraduate students will complete "a senior project or paper, in

order to synthesize the work done in the curriculum . . . .” What we have discovered through our internal assessments, though, is that while students may be proficient in their disciplinary or content knowledge at the end of their studies, they continue to need improvement in the ability to express that knowledge in a scholarly way through high levels of writing, critical thinking, and information literacy. Additionally, feedback from employers to a survey conducted by Hart Research Associates (2013) strongly indicates the need for students to develop “analytic, problem solving, and communication skills” along with the ability to “conduct research and use evidence-based analysis” (22). By focusing our QEP on the skills of writing, critical thinking, and information literacy within the major, we will respond not only to our internal assessments of student learning but also to employers’ needs and the expectations of graduate and professional programs.

FGCUScholars has been developed so that it will impact the General Education Program and all undergraduate programs and will lead to stronger capstone scholarly projects in the majors. The goals of the program include developing a QEP that:

- Integrates vertically (across all four years) and horizontally (in multiple first year courses, second year courses, etc.) as it builds towards the capstone experience;
- Creates or refines coursework within each major, such as gateway courses and research methods courses, that allows students to explicitly develop the skills of writing, critical thinking, and information literacy within their disciplines; and
- Leads to the development of final scholarly projects in the capstone course that evince higher levels of writing, critical thinking, and information literacy.

In addition, FGCU’s Quality Enhancement Plan will:

- Include meaningful and sustainable assessments;
- Offer added value to faculty and programs;
- Include strong coordination and support and balance coordination with faculty and program responsibility;
- Leverage the existing talent and expertise of faculty, programs, and centers/initiatives; and
- Create opportunities and possibilities for cross-disciplinary collaboration.

The plan derives from the mission of the university, which states that “Outstanding faculty uphold challenging academic standards and balance research, scholarly activities, and service expectations with their central responsibilities of teaching and mentoring. Working together, faculty and staff of the University transform students’ lives . . . .” The plan was developed from an inclusive and thoughtful

process and was based on assessment of our students' learning. During the implementation of the Quality Enhancement Plan, the University will:

- Develop a refined, disciplinary-based language around the skills of writing, critical thinking, and information literacy within each program;
- Develop a shared general language around these skills relevant to the General Education Program;
- Develop best practices for teaching and assessing these skills across four years of study to culminate in a senior project;
- Provide avenues for professional development of FacultyScholars, representatives from each undergraduate program who will provide leadership within their majors and who will come together as a community in order to share their work;
- Iteratively assess student learning in order to continuously improve our teaching and learning practices so that student learning improves;
- Continuously evaluate our assessment data and our assessment practices in order to refine our plan as needed.

The end result of FGCUScholars will be improved written communication, critical thinking, and information literacy skills within the majors and as evidenced in the capstone projects.

FGCU has created an ambitious five year plan to achieve these goals. In the current year, two years before launching our QEP, we are conducting a survey of all undergraduate program leaders to discern the level of explicit teaching of writing, critical thinking, and information literacy within the courses in the program, including the capstone course. We will gather faculty from across the campus to analyze and discuss the results of this survey and to begin conversations within every undergraduate program about the course or program revisions that will be needed to launch the QEP. In the first year, we will formally name faculty within each undergraduate program to provide leadership for their program (these faculty will likely be the same as those who assisted in the analysis of the survey results); these FGCUScholars will broaden the reach of the QEP into all majors. The FGCUScholars will be responsible for further refining definitions of writing, critical thinking, and information literacy to make them program specific and they will develop or refine specific learning outcomes to be assessed through the scholarly project in the capstone course. We will connect this conversation to work being completed in the General Education Program as it is revised to meet state mandates so that we will be able to build a basis for our QEP in the first two years of an undergraduate's study. Year one will include any necessary

curricular revision within the majors and the General Education Program to ensure that the skills of writing, critical thinking, and information literacy are developed at increasingly rigorous levels as students progress in their studies. We will also continue to gather baseline data of student learning. In years two through five, we will assess student learning in the refined curriculum, which will allow us to revise our teaching and learning practices and assessment strategies.

[Note: this part will be developed once we have completed our Implementation Plan, which is being written in Fall 2013.]

## **Part II. Introduction**

### Institutional Background

Opened at the turn of the twenty-first century, Florida Gulf Coast University is a unique institution of higher education with emphases on student engagement and student success. As our current mission statement explains, we have borrowed from the best traditions of the past while also seeking to break new ground in our emphasis on student learning:

Established on the verge of the 21<sup>st</sup> century, Florida Gulf Coast University infuses the strengths of the traditional public university with innovation and learning-centered spirit, its chief aim being to fulfill the academic, cultural, social, and career expectations of its constituents. (Approved Jan 19, 2010 by BOT)

With a commitment to balancing the intellectual, social, and professional expectations of our students, Florida Gulf Coast University has created academic programs that provide our students with an avenue to success at a time of great global, technological, social, and environmental change. Indeed, one of the more unique aspects of Florida Gulf Coast University is the emphasis on sustainability education and civic engagement; our current mission statement notes that FGCU “continuously pursues academic excellence, practices and promotes environmental sustainability, embraces diversity, nurtures community partnerships, values public service, [and] encourages civic responsibility . . . .” As a result, our first Quality Enhancement Plan, which ran from 2005-2010, focused on developing an ecological perspective and fostering community involvement.

In our desire to balance tradition with innovation, we have created academic programs at the undergraduate level that allow our students to participate in an educational journey that assists them in mastering the skills and content knowledge necessary for their success in life and work and in demonstrating their mastery of these abilities in a capstone project, a requirement of all undergraduate programs. As noted in the university’s founding mission statement, in the capstone course, we strive to provide students with the opportunity to connect the various elements of their learning into a coherent whole:

Undergraduate students will have a mentor/advisor who will guide them during a senior project or paper, in order to synthesize the work done in the curriculum and prepare the students to organize ideas from across disciplines in a final research document.  
(Founding Mission Statement, Approved by the Board of Regents November 20, 1992)

The notion of synthesizing the learning that has occurred over the years of a student's journey is elaborated in one of our Guiding Principles:

Connected knowing and collaborative learning are basic to being well educated. The University structures interdisciplinary learning experiences throughout the curriculum to endow students with the ability to think in whole systems and to understand the interrelatedness of knowledge across disciplines. (Approved by the Deans Council June 18, 1996)

We have developed several opportunities for students to synthesize their learning with students from other majors, including the development of interdisciplinary cores within the Colleges of Arts and Sciences, Business, and Health Professions. In addition, all undergraduate students are required to complete the University Colloquium: A Sustainable Future, an interdisciplinary course designed to reflect upon the concept of sustainability from multiple perspectives; because students from all majors gather together in this course, a great deal of cross-disciplinary synthesis occurs during the conversations and discussions that are at the heart of the pedagogy for the course. While students have also been expected to develop an integration and synthesis of their learning within their disciplines in a required capstone course, faculty members have recently expressed a desire to create an integrated learning experience that begins in the General Education Program and continues through the upper level courses in each major. This desire was reiterated in the discussions about revising the General Education Program in the 2012-2013 academic year.

In the 2011-2012 academic year, a Faculty Senate Task Force was created to review the current list of student learning outcomes and to narrow that list from the nine learning goals that had been developed in 1997 when the institution opened to a more manageable list that would allow each program to meaningfully assess student learning for the purposes of continuous improvement. The idea also was to create student learning outcomes that would be measured across all four years of study, along with



specialized learning outcomes that would relate just to the major. The task force defined student learning outcomes as follows:

University-wide learning outcomes are those that are integrated into the instructional curriculum of every program such that students will be able to demonstrate their learning regarding that outcome and faculty will be able to assess that learning for the purposes of program improvement. (Faculty Senate Outcomes and Assessment Task Force Report, March 20, 2012)

The conclusion of this inclusive, year-long process was the determination that three areas of student learning should be taught and assessed in every degree program and across all four years of study at FGCU:

- communication skills,
- critical thinking skills, and
- content/discipline knowledge and skills.

The task force concluded that each undergraduate degree program would develop measurable student learning outcomes in each of the three areas, as relevant to the student learning needs of that program, and to assess those outcomes on a regular basis in order to improve student learning. The emphasis on the key skills of communication and critical thinking are in line with national trends and with responses from the professional sphere: employers want students who can think critically and communicate effectively.

Fortunately, because of the timely nature of the creation of Florida Gulf Coast University, most programs had developed learning outcomes in these areas shortly after we opened and had been assessing those outcomes in order to meet the expectations of state requirements, professional accrediting bodies, and the Southern Association of Colleges and Schools—and, more importantly, to demonstrate our commitment to student success and engagement.

### Process for Identifying the Quality Enhancement Plan

Florida Gulf Coast University's commitment to key student learning outcomes, including especially critical thinking and effective communication, to the integration of learning experiences, and to assessment for continuous improvement is obvious in the process that we underwent to identify a topic for our Quality Enhancement Plan. Because we started early on the development of our Quality

Enhancement Plan, we were able to use a three year process to select a topic and develop a focus for the plan, gaining widespread feedback and support for the plan. We began with a QEP Topic Selection process in the first year and concluded with a QEP Topic Development process over the next two years. Faculty, staff, students, and administrators had ample opportunity to participate in both processes, providing ideas, feedback, and suggestions as the process unfolded. Most importantly, we emphasized the importance of being inclusive in this process: all programs and all undergraduate students would be touched by this plan as we sought to develop a QEP that impacted the entire undergraduate student population.

The year-long process used to select a topic began with the creation of a QEP Selection Committee, a call to all faculty, staff, and students to submit ideas and suggestions, a selection of four possible topics for further development, and then review of the developed topics by the committee, which made a recommendation to the Provost. The QEP Selection Committee was a university-wide group of faculty, staff, administrators, and students whose intent was to facilitate a transparent and inclusive process for the selection of a topic for the University's next QEP. The committee worked openly to elicit ideas broadly from the university community, identify those with the greatest potential for success, and ensure that proposals recommended for consideration by the university met the criteria necessary for compliance with SACS Core Requirement 2.12 and Comprehensive Standard 3.3.2. The Quality Enhancement Plan Selection Committee was chaired by Dr. Linda Serro, Director of the FGCU Teaching, Learning, and Assessment Initiative and included representation from the Faculty Senate, the Staff Advisory Council, Student Government, the Deans Council, the Assessment Council, the Office of Undergraduate Studies, and university Department Chairs. The committee included the following members.

- Linda Serro (Chair)
- Win Everham (Faculty Senate)
- Claude Villiers (Faculty Senate)
- Tom Bevins (Faculty Senate)
- Patricia (Pi) Rice (Staff Advisory Council)
- Keishla Negron-Acevido (Student Government)

- Jim Wohlpart (Dean of Undergraduate Studies)
- Tony Barringer (Council of Deans representative)
- Mary Ann Zager (Department Chairs representative)
- Barbara Stites (Assessment Council representative)

Meeting on a regular basis throughout the fall 2011 and spring 2012 semesters, the committee worked collegially and collaboratively to elicit and recommend interesting topics relevant to the university's mission.

A two-phase selection process was employed to identify the next Quality Enhancement Plan topic. During the first phase, in September and early October of 2011, the committee solicited ideas from the university community using a template on the university website. Individuals or groups were invited to suggest appropriate topics along with the following information:

1. What the proposed topic is designed to address and what it is intended to achieve.
2. The topic's relationship to the university's mission and to the university strategic plan.
3. What university student learning outcomes or general education competencies the topic will address.

The QEP Selection Committee reviewed the forty submitted topics against the stated criteria and worked to determine whether or not the topic had a broad base of support across the university. At the end of the first phase, four broad topics were identified as potential QEP topics:

- Enhancing Student Learning through Technology
- Undergraduate Research and Scholarship
- Writing, Critical Thinking, and Literacy across the Curriculum
- Student Success and Engagement.

Descriptions of these four initial topics can be found on the QEP Topic Selection website

(<http://www.fgcu.edu/QEP/generalinformation.html>). Teams were then identified to further develop these four general topics.

During the second phase of the selection process, a more detailed description of the proposed QEP topic was requested for development. The criteria for evaluating these more detailed descriptions included the following:

- The use of institutional data/assessment in development of the proposed topic;

- How the proposed topic will make a significant contribution to student academic success and achievement of student learning outcomes;
- A description of the resources that will be needed to implement the proposed topic and their likely return on the institution's investment;
- The likelihood of project goals being achieved within four years of implementation;
- The proposed topic's links to institutional mission and the goals of the university strategic plan;
- The potential for assessment of project goals through quantitative and/or qualitative measures;
- The magnitude of support within the university community for implementation of the proposed topic.

Teams were asked to complete their proposals by the middle of January, 2012, for committee review. The committee convened in late January and February to analyze the proposals and provide to the Provost and Vice President for Academic Affairs a list of strengths for each proposal, as well as areas of concern. The Provost then made the final selection in March of 2012 and announced FGCU's QEP Topic to the university community before the end of the spring 2012 semester. At that time, the QEP Steering Committee was formed and a broad timeline was announced:

- the 2012-2013 academic year would be spent reviewing best practices and current literature, presenting information and getting feedback from the university community regarding this research, and developing a preliminary focus to the plan; and
- the 2013-2014 academic year would be spent gathering further feedback from the university community, finalizing the focus of the plan and developing the implementation process and timeline as well as the budget, and sending the QEP forward to administration for review.

With the selection of Writing, Critical Thinking, and Information Literacy as FGCU's QEP topic, we were ready to begin our work.

The Quality Enhancement Plan Steering Committee that provided leadership in the development of the QEP topic again included broad based support from all areas on campus, including especially faculty and students. Representatives from all five colleges and the library were included on the committee in order to maintain contact with the faculty across the university. In addition, leaders within

Student Government regularly attended Steering Committee meetings in order to be apprised of progress and to participate in developing the focus for the plan. The committee members included:

|                      |  |
|----------------------|--|
| Kevin Aho            | College of Arts and Sciences                           |
| Tom Bevins           | College of Health Professions and Social Work          |
| Carol Bledsoe        | Writing Center   |
| Anne-Marie Bouche    | College of Arts and Sciences                           |
| Anna Carlin          | Library Services                                       |
| Peter Cuderman       | Student Government President                           |
| Sarah Davis          | Colloquium   |
| Kris De Welde        | General Education                                      |
| Jackie Greene        | College of Education                                   |
| Billy Gunnels        | College of Arts and Sciences                           |
| Anna Haney-Withrow   | College of Arts and Sciences                           |
| Megan Just           | Student Representative                                 |
| Carrie Kerekes       | Lutgert College of Business                            |
| Tanya Kunberger      | U.A. Whitaker College of Engineering                   |
| Jameson Moschella    | University Housing/FYRE Program                        |
| Stacey Parker        | Center for Academic Achievement                        |
| Linda Rowland        | College of Arts and Sciences                           |
| Linda Serro          | College of Education                                   |
| Jim Wohlpart (Chair) | Dean of Undergraduate Studies                          |
| Anne Young           | Advisor, College of Health Professions and Social Work |

In the first part of the Steering Committee's work, three working groups were created for each of the areas of the Quality Enhancement Plan: writing, critical thinking, and information literacy. Specialists in these areas facilitated the work of these groups, which involved not only Steering Committee members but also members of the broader university community who had knowledge of these areas. These working groups reviewed best practices and scholarship on each of their areas and produced a review document for the entire Steering Committee. This information was then shared and discussed at the end of the fall 2012 semester and a plan was developed to use this information to create a variety of models for the QEP.

The first working group focused on reviewing literature and best practices and developing models for critical thinking. The research that was reviewed by the faculty working group generated a five part definition for critical thinking. According to this definition, critical thinking involves, first, "thinking about how we think." This entails identifying background assumptions and presuppositions that may

influence our thoughts. Second, it involves critically assessing whether or not these assumptions are valid, accurate or sound. Third, it involves uncovering the social, cultural, and historical contexts from which these assumptions emerge and engaging them from multiple perspectives. Fourth, it remains consistently open to revision and self-correction. And finally, it involves taking some form of focused, practical action on the basis of critical reflection (Nosich 2005; Moore and Parker 2011; Brookfield 2012; Bean 2011; Dewey 1998). From this definition, the group developed three possible models for the QEP at FGCU: the Integrative Approach (where critical thinking would be integrated across the curriculum), the Solo Approach (where a single course would be developed), and the Pedagogical Methods approach (where the focus would be on curricular and pedagogical design). The general discussion regarding this model led to a consensus that FGCU should develop an integrative model for our QEP—both horizontal integration (across a student’s year of study) and vertical integration (across all four years of study). In addition, there was some agreement that specific courses could be identified that would include an emphasis on critical thinking, so the “solo” approach could be a part of the “integrative approach.”

The second working group that was convened focused on writing. The faculty generated what they considered a general approach to developing writing at FGCU that would provide opportunities for different methods of meeting that approach. The general interest was to integrate writing into the disciplines, allowing students to learn how to write well in their chosen field of study. Writing in the first two years would provide a foundation for this later writing. Two items emerged from this proposal. In terms of administrative support, the desire was for creating some kind of center or institute that would be responsible for providing oversight of the QEP—not to control courses and curriculum but to support the faculty as they developed their programs in response to the QEP. (The focus of the discussion in this proposal was on the writing piece, but this center or initiative would need to work more broadly with critical thinking, information literacy, and assessment; it would also have an important role in professional development.) In terms of curriculum development, the faculty proposed that Composition I and II would be foundational courses in the QEP and would thus need additional resources; but there was also a move (which was strongly supported by the committee in the discussion) to include writing early

on in the Junior year within the major that would build on the work completed in Composition I and II (and other General Education courses). The courses in the major could focus on reading, research, and writing in the disciplines and thus assist students in more clearly expressing their work as scholars in their fields. At this point, discussion ensued about the role of the capstone course in each major where students are expected to develop a scholarly project which includes writing, critical thinking, and information literacy.

The third working group focused on information literacy. Common definitions of information literacy mention possession of an integrated set of skills, knowledge of resources from which to retrieve information, and the ability to analyze and use information (Association of College and Research Libraries 2000; Burkhardt, MacDonald & Rathemacher 2003; Gibson 2008; Rockman 2004). Currently, the Association of College and Research Libraries (ACRL) (2000) defines information literacy as the ability to “recognize when information is needed and . . . locate evaluate and use effectively the needed information” (Grassian & Kaplowitz, 2001). According to the research, information literacy includes the skills, dispositions, and abilities necessary to be a productive individual in a “technologically sophisticated global society” (Rockman, 2004, 25). Significantly, information literacy skills are often talked about in proximity to discussions of lifelong learning and the ability to perform well in the modern workplace. ACRL (2000) explains that “Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning.” In terms of potential models for teaching and assessing information literacy, the Boyer Commission (1998), ACRL (2000), Grassian & Kaplowitz (2001) advocate for an integrated curriculum where information literacy strategies are taught and standards are woven into “curricular content, structure and sequence.” This integrative approach offers multiple possibilities for students to use critical thinking skills, to become skilled users of information sources and increases personal responsibility for learning. An integrated approach provides multiple and consistent opportunities for

students to seek, evaluate and manage information gathered from multiple sources and to practice discipline-specific research methods.

After each of these working groups presented their research and possible models, the Steering Committee began to synthesize the work completed and to develop a focus for the plan. The conversation began to center around the concept of allowing students to enhance their work as scholars in their fields, and specifically to advance the ability of our students to improve their writing, critical thinking, and information literacy skills as they move through their programs and towards the capstone projects. The concept of undergraduate research that has been adopted at FGCU has been broadened to include scholarship more generally. According to the Council on Undergraduate Research (CUR), the nationally recognized body that organizes work on undergraduate research, undergraduate research is defined as “An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline.” At FGCU, we have broadened our understanding of research to include scholarship more generally, using Boyer’s *Scholarship Reconsidered* (1990). The inquiry or discovery based mode of teaching and learning, centered around student involvement in research and scholarship, has been used as a locus to advance their learning. As noted by the CUR, this mode of teaching and learning “develops critical thinking, creativity, problem solving and intellectual independence” as well as “increases retention” and “provides effective career preparation,” key indicators of success at Florida Gulf Coast University. The focus of our QEP, then, became the development of “FGCUScholars” within the major with a specific focus on writing, critical thinking, and information literacy.

The QEP Steering Committee agreed that there was a great deal of overlap and consonance across the models and that this level of agreement could lead to the development of a strong focus for FGCU’s QEP. However, the committee also agreed that we were ready to share our work with the broader community so that we could get feedback from the university about how to move forward as we focused the plan. A subcommittee agreed to convene to discuss how the various proposals and models could be reshaped so that they could be presented in open faculty forums. The reshaping process included the



development of a statement of guiding principles for the QEP that would open the door for faculty in a variety of disciplines to see how they could integrate their teaching and learning in the broader QEP. Several principles that were discussed included: creating ownership across the university in all undergraduate programs; integrating the QEP horizontally and vertically; creating meaningful and sustainable assessments; offering possibilities rather than being prescriptive.

Two faculty forums were held during the spring 2013 semester to provide the faculty, staff, and students with the information that the Steering Committee and the working groups had gathered and developed. Over fifty faculty attended the two forums and strongly supported the definitions of writing, critical thinking, and information literacy that had been developed and demonstrated interest in the various models that had been proposed. The attendees suggested that the Steering Committee was moving in the right direction as it began to focus on improving the skills of writing, critical thinking, and information literacy in our graduates, with a particular eye toward developing these skills in specific courses in the major and in the capstone projects. The Steering Committee convened after the forums to discuss the feedback and, at that point, to begin to clarify that the focus of the QEP would be on improving our students' writing, critical thinking, and information literacy skills within the major as they become scholars in their fields.

#### The FGCU QEP Topic and the Institutional Mission, Vision, and Strategic Plan

As noted, Florida Gulf Coast University opened in 1997 with an emphasis on student success and engagement. FGCUScholars, our next QEP, supports the mission, vision, and values of the institution with our focus on innovative undergraduate education and our culture of assisting students in becoming scholars in their disciplines. The Founding Mission statement, approved by the Florida Board of Regents on November 20, 1992, states that "Florida Gulf Coast University . . . has, as its primary mission, undergraduate education, with a broad range of programs in arts and sciences, business, environmental science, computer science, education, nursing/allied health, and social services." The focus on undergraduate education has not changed in the seventeen years of FGCU's existence. The current FGCU

Vision statement, approved by the FGCU Board of Trustees on January 19, 2010, states that “Florida Gulf Coast University will achieve national prominence in undergraduate education . . . .” As a major component of FGCU’s emphasis on undergraduate education, every undergraduate degree program includes a capstone course where students are expected to produce a major scholarly project that synthesizes their learning. Such an emphasis on the integration and synthesis of student learning existed with the inception of the university; the Founding Mission Statement declares that “Undergraduate students will have a mentor/advisor who will guide them during a senior project or paper, in order to synthesize the work done in the curriculum and prepare the students to organize ideas from across disciplines in a final research document.”

Over time, the focus in the capstone courses has been on the integration of knowledge and learning within the disciplines. The current FGCU Academic Catalog states that “Each program provides a capstone educational experience totaling three credit hours . . . . These seminar courses integrate skills and knowledge gained from particular programs and broaden student’s awareness and understanding of the disciplines related to their chosen field” ([www.fgcu.edu/Catalog/capstone.asp](http://www.fgcu.edu/Catalog/capstone.asp)). The capstone courses that have been developed within each major address student learning relevant to that particular discipline, allowing students to synthesize their knowledge and learning and to express this learning in a major capstone project.

Significantly, during the QEP Topic selection process, faculty did not express concern about student learning of disciplinary knowledge. Indeed, one of the QEP Topics that was put forth was to further advance undergraduate research at FGCU across all disciplines. In considering and getting feedback about this proposal, the Selection Committee found that there was not widespread concern about student learning of the content within their disciplines, but there was concern about students’ abilities to communicate their learning clearly and effectively, utilizing a high level of critical thinking and information literacy skills. The faculty concern has been borne out in the learning outcomes assessments that we have completed, which have shown at all levels – from the first year through the fourth – that student writing and critical thinking is not at an appropriate level of achievement. Faculty have also

discerned embedded within the assessment of writing a particular difficulty with the gathering, analysis, and use of credible sources.

Creating an atmosphere of enhanced student learning within the disciplines is also a primary emphasis within FGCU's current Strategic Plan (2010-2015) and thus the topic for our QEP directly relates to our institutional planning efforts. Goal 1: Academic Excellence emphasizes the role of student research and scholarship, stating that:

- FGCU will pursue academic excellence by offering diverse, high quality degree programs and unique opportunities for student research, engagement, and leadership.
- Student learning will be designed to include unique opportunities for research, student engagement, and leadership.

Strategy 5 of the first goal states that FGCU will "Provide special opportunities for students to pursue studies, research, and scholarship at FGCU." In order to create synergies for the student scholarship being conducted within each major, FGCU began planning the creation of an Office of Undergraduate Research and Scholarship in 2012. This office might play an integral role in the development of the Quality Enhancement Plan.

FGCUScholars thus flows out of the vision, mission, and strategic plan of Florida Gulf Coast University and enhances the culture we have created regarding student learning. Our QEP also addresses key findings in our assessment of student learning outcomes and responds to national discussions about undergraduate education.

### **Part III. Rationale**

#### National Context and AAC&U

Opening at the turn of the twenty-first century, Florida Gulf Coast University has created programs focused on student success and engagement. As a relatively young institution of higher education, we have had the opportunity to create programs that meet the needs of the new millennium. The latest survey of employers by the Association of American Colleges and Universities (AAC&U), “It Takes More Than a Major: Employer Priorities for College Learning and Student Success” (Hart Research Associates 2013), concludes that “*Employers recognize capacities that cut across majors as critical to a candidate’s potential for career success, and they view these skills as more important than a student’s choice of undergraduate major*” (22). The report’s key findings state that “*Across several areas tested, employers strongly endorse educational practices that involve . . . such things as collaborative problem-solving, research, senior projects, community engagement, and internships*” (28). AAC&U’s report supports the type of educational journey we have designed at Florida Gulf Coast University which includes collaborative learning as a cornerstone to our pedagogical practices, civic engagement and service learning as a graduation requirement, and, most relevant here, a senior capstone project that allows students to produce a major scholarly project relevant to their disciplinary field.

Embedded within the production of the senior capstone projects at FGCU are the key skills of written communication, critical thinking, and information literacy. Several recent surveys of employers conclude that these skills are of central importance in a college education. A recent article in *Forbes* magazine notes that the number one skill that employers seek is critical thinking which is defined as “Using logic and reasoning to identify the strengths and weaknesses of alternate solutions, conclusions, or approaches to problems” (Casserly 2012). In a survey from the National Association of Colleges and Employers, problem-solving or critical thinking skills and written communication skills ranked second and third in terms of the attributes employers seek in candidates; when skills are rated for their relevant

importance, the results again emphasize the skills of writing, critical thinking, and information literacy (*Job Outlook 2013*).

| Skill/Quality   | Weighted Average* |
|---|-------------------|
| Ability to verbally communicate with persons inside or outside the organization | 4.63              |
| Ability to make decisions and solve problems                                    | 4.51              |
| Ability to obtain and process information                                       | 4.43              |

\* 1 = Not at all important; 5 = Extremely important

Finally, the AAC&U survey in 2013 by Hart Research Associates of 318 employers with 25 or more employees concludes the following about these skills:

- “[E]mployers indicate that they prioritize critical thinking, communication, and complex problem-solving skills over a job candidate’s major field of study when making hiring decisions.” (4)
  - More specifically, of the employers surveyed, 93% agree that the development of skills is more important than the selected major; 59% strongly agree (4).
- “Few [employers] say *less* emphasis should be placed on any of the learning outcomes tested, but employers overall are most likely to believe there is a need to increase the focus on active skills such as critical thinking, complex problem-solving, communication, and applying knowledge to real-world settings.” (7)
  - More specifically, 82% of employers stated that more emphasis should be placed on critical thinking; 80% on communication skills; and 72% on the location, organization, and evaluation of information from multiple sources (8).

Because a senior capstone project is one important way to develop and assess student learning of these skills, a great deal of emphasis within organizations such as AAC&U and the Council on Undergraduate Research (CUR) have been placed on these projects. Seventy-nine percent of employers surveyed by Hart Research Associates agreed that students should “Complete a project prior to graduation that demonstrates their knowledge and skills” (10).

### Internal Assessment of Student Learning

Significantly, while FGCU has developed programs for the twenty-first century, our assessment of student learning indicates that for the key learning outcomes of written communication, critical thinking, and information literacy our students do not graduate having attained the level of learning that we desire. Our assessment of these skills begins in General Education where we analyze student essays for the skills of written communication and information literacy at the end of Composition II using the AAC&U rubric for Written Communication (VALUE Rubrics: Written Communication)). For the skill of critical thinking, we assess student work in a required course in our General Education program called HUM 2510 Understanding Visual and Performing Arts; in this course students must learn a great deal of content knowledge about various art forms and then apply that knowledge in their analysis of specific artworks. We have adapted the AAC&U rubric for Critical Thinking for this assessment (VALUE Rubrics: Critical Thinking). For these assessments in General Education, we expect students to achieve at the level of Milestone 2, the second of four levels of achievement. To build on our assessments of student learning in the General Education Program, we have also instituted a university-wide assessment of capstone projects using the same AAC&U rubrics; for this assessment we expect these upper level students to achieve between Milestone 3 and Capstone 4, the highest levels of achievement on the rubric.

We have completed our assessments of writing and information literacy in the Composition II course over the last four years. In all cases, the average score that students achieve is below the Milestone 2 level (below a score of 2.0) and in most cases the specific category of “Sources and Evidence” receives the lowest score; in the Composition assessment, the category of “Sources and Evidence” focuses on students’ abilities to gather, analyze, and appropriately use relevant, high quality information.

|             | Context and Purpose of Writing | Content Development | Genre and Disciplinary Conventions | Sources and Evidence | Control of Syntax and Mechanics | Average |
|-------------|--------------------------------|---------------------|------------------------------------|----------------------|---------------------------------|---------|
| Spring 2010 | 1.95                           | 1.95                | 1.86                               | 1.69                 | 1.96                            | 1.88    |
| Spring 2011 | 2.07                           | 1.82                | 1.97                               | 1.93                 | 1.94                            | 1.94    |
| Spring      | 1.86                           | 1.82                | 1.71                               | 1.70                 | 1.80                            | 1.78    |

|             |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|
| 2012        |      |      |      |      |      |      |
| Spring 2013 | 1.92 | 1.69 | 1.78 | 1.76 | 1.84 | 1.80 |

While student scores approximate the 2.0 threshold we have set for students at the end of their first year in college, we have not been able to raise it to that level on a consistent basis. Even more disconcerting is that student achievement at the senior level does not improve greatly, with average scores below the Milestone 3 level (with a score of 3.0). Over the last two years we have completed our university-wide assessment of capstone projects using the same AAC&U rubric for Writing:

|             | Context and Purpose of Writing | Content Development | Genre and Disciplinary Conventions | Sources and Evidence | Control of Syntax and Mechanics | Average |
|-------------|--------------------------------|---------------------|------------------------------------|----------------------|---------------------------------|---------|
| Spring 2012 | 2.9                            | 2.6                 | 2.6                                | 2.4                  | 2.6                             | 2.7     |
| Spring 2013 | 3.1                            | 2.7                 | 2.7                                | 2.6                  | 2.8                             | 2.8     |

Again, as with our lower level students, the specific area where students consistently score the lowest is in information-literacy – the ability to gather, analyze, and appropriately use research and information.

Similar results occur in our assessment of critical thinking. We have adapted the AAC&U rubric on critical thinking for the assignments we have been assessing, adding a score of “lower range” for students who do not meet the criteria for critical thinking and eliminating the highest range of the rubric, a score of “4,” because this is the achievement level expected of graduating seniors. Our goal is for students to score around an average of a 2.0 at the end of the General Education Program. The rubric levels are described as follows:

- Lower Range: Fails to identify or evaluate key concepts and/or underlying relationships and/or assumptions and implications; synthesizes information poorly; draws inappropriate or no inferences.

- Benchmark 1: Identifies and evaluates some key concepts, assumptions and implications and underlying relationships; synthesizes some information; occasionally draws appropriate inferences.
- Milestone 2: Defines key concepts. Identifies and evaluates underlying relationships effectively; identifies assumptions and implications; synthesizes information well; draws reasoned inferences.
- Milestone 3: Accomplished and creative use of critical thinking skills, including a high level of defining key concepts, organizing and synthesizing information, identifying assumptions and implications, and drawing reasoned inferences.

Within the General Education program, our assessment suggests that most of our students score between a Benchmark 1 and Milestone 2, with scores improving over the last year as a result of changes to the Understanding Visual and Performing Arts course.

| HUM 2510<br>(General Education) | Lower Range | Benchmark 1 | Milestone 2 | Milestone 3 |
|---------------------------------|-------------|-------------|-------------|-------------|
| Fall 2011                       | 19%         | 51%         | 22%         | 8%          |
| Fall 2012                       | 4%          | 43%         | 43%         | 9%          |

In 2012-2013, as a pilot, we used the same rubric to score the senior capstone projects completed in required courses at the end of every undergraduate major. While students did have higher overall scores than those attained in the assessment of the General Education Program, students did not achieve above Milestone 3 as desired.

| Capstone Courses<br>(Seniors) | Lower Range | Benchmark 1 | Milestone 2 | Milestone 3 | Capstone 4 |
|-------------------------------|-------------|-------------|-------------|-------------|------------|
| Spring 2013                   | 0%          | 12.5%       | 75%         | 12.5%       | 0%         |

Again, while students made gains in their learning of almost one level, they are not scoring on average above Milestone 3 and towards the score of 4, which is the Capstone score. Our goal is to move the achievement of our graduating seniors in writing, critical thinking, and information literacy towards an average score of 3.5 – between a Milestone 3 level and a Capstone 4 level.



## National Survey of Student Engagement

While students have not achieved at a level that meets our goals, we have instituted programs and created learning opportunities for students to develop their writing, critical thinking, and information literacy skills. Florida Gulf Coast University has participated in the National Survey of Student Engagement (NSSE) over the last several years (2003, 2005, 2008, and 2010); the results of this survey demonstrate that FGCU provides students with more opportunities to work on their writing and critical thinking than other institutions in our comparison group (southeast public universities and those in our Carnegie class). So, while our students are not graduating with skill development at the level we desire, we have provided a foundation for getting there.

In terms of written communication skills, student respondents from FGCU on the most recent NSSE (2010) report that as seniors they write more than senior level students at peer institutions. The results also suggest that as students progress in their academic careers they are writing more longer papers than they did early in their academic careers. These responses are encouraging as they suggest that we have a foundation for achieving our goals in this Quality Enhancement Plan, though we have room for improvement.

|                                      | Florida Gulf Coast University      | Southeast Public Universities           | Carnegie Class                          |
|--------------------------------------|------------------------------------|---|---|
| Written papers of fewer than 5 pages | First Year – 3.02<br>Senior – 2.88 | First Year – 2.85<br>Senior – 2.82      | First Year – 3.03<br>Senior – 2.96      |
| Written papers of 5 to 19 pages      | First Year – 2.05<br>Senior – 2.56 | First Year – 2.14<br>Senior – 2.42      | First Year – 2.24<br>Senior Year – 2.52 |
| Written papers 20 pages or more      | First Year – 1.24<br>Senior – 1.72 | First Year – 1.30<br>Senior Year – 1.62 | First Year – 1.33<br>Senior – 1.64      |

During the current year, how much writing have you done? 1 = None; 2 = 1-4 papers; 3 = 5-10 papers; 4 = 11-20 papers; 5 = More than 20 papers

In terms of critical thinking skills, the results for FGCU are even stronger, as follows:

|  | Florida Gulf Coast University      | Southeast Public Universities      | Carnegie Class                     |
|--|------------------------------------|------------------------------------|------------------------------------|
| Analyzing ideas, experiences, theories                           | First Year – 3.25<br>Senior – 3.36 | First Year – 3.12<br>Senior – 3.27 | First Year – 3.10<br>Senior – 3.26 |
| Synthesizing ideas, information, experiences, etc.               | First Year – 3.01<br>Senior – 3.18 | First Year – 2.92<br>Senior – 3.07 | First Year – 2.91<br>Senior – 3.07 |
| Making judgments about the value of information, arguments, etc. | First Year – 3.10<br>Senior – 3.10 | First Year – 2.94<br>Senior – 3.03 | First Year – 2.95<br>Senior – 3.04 |
| Applying theories or concepts                                    | First Year – 3.21<br>Senior – 3.32 | First Year – 3.07<br>Senior – 3.25 | First Year – 3.05<br>Senior – 3.24 |

During the current year, how much has your coursework emphasized these activities? 1 = None; 2 = Some; 3 = Quite a bit; 4 = Very much

Not only does FGCU match up well with those in the southeast but it also matches up well with those in its Carnegie class. Students report that between their first year and their senior year, coursework more

strongly emphasizes critical thinking skills, and they report development of higher order skills such as analyzing ideas, experiences, and theories; synthesizing ideas, information, and experiences; and applying theories and concepts (only the category of “making judgments” remains steady).

## Conclusion

Florida Gulf Coast University was founded with a strong emphasis on undergraduate education and particularly on the development of a strong liberal education. Following the work of the Association of American Colleges and Universities’ Liberal Education and America’s Promise (LEAP) project, FGCU has developed and assessed essential learning outcomes, created authentic and meaningful assessments, and worked to broaden our reach to all students. We have also engaged in a large number of LEAP’s High-Impact Practices, including senior capstone courses. Our goal has been to create an educational journey for our students that not only prepares them for work, but also prepares them for life. As we note in one of our Guiding Principles, “The University is dedicated to the highest quality education that develops the whole person for success in life and work.” As such, while the perspective of employers apparent in AAC&U’s latest survey is important, it is only one piece of a larger puzzle.

That larger piece is about life-long learning, about developing engaged citizens, and about transforming students so that they have the opportunity for meaningful lives. The emphasis in our Quality Enhancement Plan on enhancing the skills of writing, critical thinking, and information literacy within the majors and especially as evidenced in the products of the capstone projects will allow students to become active and engaged citizens who have the abilities to keep learning throughout their lives. In so doing, students demonstrate their curiosity and wonder at the world from within their chosen discipline; they demonstrate their ability to locate, evaluate, and meaningfully use information; and they demonstrate their ability to consider ideas deeply, to analyze those ideas, and to work towards synthesizing and applying those ideas to real world situations. All of these characteristics are essential to becoming not only scholars in their fields but also engaged citizens and life-long learners.

## **Part IV. Literature Review**

After the general topic of writing, critical thinking, and information literacy had been identified for Florida Gulf Coast University's next Quality Enhancement Plan, the Steering Committee convened to discuss how to move forward with gathering and sharing information, including reviewing literature related to this general topic and analyzing best practices. We also agreed that we wanted to broaden participation in this part of the Quality Enhancement Plan project in order to begin to build capacity and buy-in around campus. The Steering Committee created three working groups, one each for the three areas of the QEP, and then worked to add other faculty, staff, and students to these working groups. The charge of these inclusive groups was to gather information and begin to consider how we might define writing, critical thinking, and information literacy within our QEP and, more importantly, how we might begin to focus our general topic. Each of the working groups developed a review of literature for their area which was shared with the broader Steering Committee and with the university at large during our faculty forums.

### **Review of Literature: Writing**

#### **What is Writing?**

Writing can be defined in various ways. For our purposes, we call upon several core definitions. Writing to learn is focused on a particular set of pedagogical strategies that use writing as more than a way to communicate. Writing is a way to foster critical thinking and explore learning. Writing to learn activities are often short, impromptu and low stakes ("Writing to Learn"). In contrast, Writing in the Disciplines gives students practical writing tasks, often formal papers, that allow them to practice writing skills and to learn and practice the writing conventions within a particular area of study ("What is Writing in the Disciplines?").

Three potential types of writing courses are defined as writing *focused*, writing *intensive*, and writing *enriched* (adapted from Taylor and Peterson 7). Composition I and Composition II are examples

of writing *focused* courses, the main objective of which is to teach the skill of writing (7). Writing *intensive* courses, the main objective of which is to teach specific course content using writing as the primary method of student engagement and assessment, could be sophomore and junior level courses within the major that would build on the work completed in Composition I and II (and other general education courses). The courses in the major could focus on reading, research, and writing in the disciplines and thus assist students in more clearly expressing their work as scholars in their fields. Writing *enriched* courses, the main objective of which is to teach specific course content using writing as one major method of student engagement and assessment, would be the capstone courses in each major where students are expected to develop a scholarly project which includes writing (7). This type of writing encourages students to grapple with ideas so they begin to internalize new ways of thinking.

### **Why is Writing Important for FGCU students?**

Writing is crucial to learning, not just in the writing classroom, but in all classrooms. Ideally, writing must be sustained throughout the curriculum for students to sufficiently develop their skills. According to Tim N. Taylor and Greg Peterson, “Writing stimulates thought and challenges students to communicate their ideas, so writing represents a valuable learning tool for any classroom. Writing is simply one of the best ways to provoke, evaluate, and assess student learning. Incorporating writing . . . promote[s] deeper discussion and understanding of course concepts” (4). Thus, writing is a catalyst for synthesis and understanding of course content.

Further, according to Taylor and Peterson, “writing stimulates critical thinking” (4). Taylor and Peterson go on to explain the value of writing beyond the composition classroom: “No matter the discipline or major, writing assignments and exercises can be used to stimulate understanding and increase critical understanding of course content. The act of writing requires students to play and work with ideas and concepts learned in the course. Writing promotes active thinking because not only must students think about course content when writing, but they must also do something with their ideas. Writing forces students to think about ideas and put them into action” (4).

Dan Berrett supports this concept when he explains that Composition I and II do not provide enough exposure to writing practice for students to fully acquire and develop their writing skills: “We know you can’t get it right in 15 or 16 weeks . . . . It’s so highly developmental that we can’t assume students will somehow learn it once and apply it brilliantly in the upper levels of the curriculum” (Berrett A5). We know writing is a powerful learning tool, but the acquisition of writing skills is an ongoing process. Berrett goes on to say, “Writing works exceedingly well as both a way to access learning and a means of deepening that learning, according to experts who study its effects on students” (A4). “That’s because writing is uniquely able to ‘make thinking visible,’ says Julie A. Reynolds, associate director of undergraduate studies at Duke University. ‘It lays bare students’ thinking, showing how well they grasp the subject matter in ways that a multiple choice or short answer test—or even a discussion section—simply can’t” (Berrett A4).

### **Theoretical Framework and Best Practices**

According to John Bean (2011), Peter Elbow and Pat Belanoff (2003), and Anne Herrington, Charles Moran, and Susan Bunche (1992), the most successful strategies for teaching writing use assignments and activities that build in stages with early, frequent and thoughtful instructor feedback. These texts provided examples of assignments and course design that require students to complete small writing tasks that later inform a larger research project, or to complete and submit the stages of a larger assignment as smaller assignments in themselves (for example, a thesis statement, an outline or pre-writing, an initial draft, a summary of secondary research, and a final paper would each be submitted and graded as individual assignments). Bean extends this concept to the overall curriculum within a discipline, explaining “the key is to integrate into early and middle courses in the major the instructional modules and scaffolding assignments that prepare students for capstone projects in their senior year” (253). In other words, students develop competency in the knowledge and skills required for expert

writing in a discipline by learning and practicing such knowledge and skills step-by-step through beginning, intermediate, and advanced courses.

Scholars of the teaching of writing emphasize the regular use of short, low-stakes writing tasks both in and out of the classroom (Bean, *Engaging Ideas*, 2011; Elbow and Belanoff, *Being a Writer*, 2003). According to Bean, these types of writing tasks should be used to encourage critical thinking about the course material by creating an active role for students in courses that traditionally use discussion and lectures (204). For Elbow, writing workshops are the building blocks for formal assignments, allowing students to explore their writing process, knowledge, and skills as they develop a longer piece (xxii). Each of these texts suggested that collaboration (or “sharing and responding” or “peer response groups”) is necessary for developing writing skills, disciplinary knowledge, and critical-thinking, but this is difficult to integrate successfully into a writing course or assignment. According to a study by Joy Marsella, Thomas L. Hilgers, and Clemence McLaren (1992), students in peer groups often fail to provide appropriately substantial written work to receive useful feedback, are unable or unwilling to provide thorough feedback on their classmates’ work, or are unable or unwilling to use classmates’ feedback when revising their own work (176). Despite these challenges, all three texts maintained an emphasis on collaboration as an integral part of academic writing. Additional instruction on how to provide and utilize peer group feedback is needed to support this key element of academic writing.

In addition to instruction in and practice with collaboration and obtaining instructor feedback at key steps in writing assignments, student approaches to writing are a key consideration. Research has demonstrated a significant gap between professors’ ideas about how students approach writing assignments and what students actually do when completing a writing assignment. According to Marsella, Hilgers, and McLaren (1992), students’ approaches to writing are typically determined by three factors: the professor’s specifications for the assignment, strategies for academic writing that have worked for the student in the past, and a web of external competing priorities like coursework, jobs, family, and belief systems (178). While professors use writing to foster their students’ learning, students approach writing by trying to find the “most efficient way to complete [an] assignment and get the highest grade”

(Marsella, Hilgers, and McLaren 181). This difference in the objectives for completing a writing assignment seem fundamental to many of the challenges of teaching writing, including those related to collaboration or peer response. Faculty successfully narrowed the gap between instructor and student approaches by treating assignments in stages, providing meaningful feedback, and giving students opportunities to practice strategies for writing and collaboration (187). For the writing element of the QEP, these approaches could be used intensively in the writing *focused* courses such as Composition I and II and other general education courses. Utilizing these strategies and a common vocabulary not only in Composition, but in other general education courses, will reinforce the skills and help students see the relevance of writing beyond the Composition classroom.

For the sophomore and junior level writing *intensive* courses, short, low-stakes writing tasks both in and out of the classroom could be used to encourage critical thinking about the course material by creating an active role for students in courses that traditionally use discussion and lectures (Bean 204). Taking these ideas a step further, Bean discussed in “Transfer of Learning and Backward Design: Rethinking the Articulation of Writing Assignments Between First-Year Composition and General Education Courses” at 2013 Conference on College Composition and Communication (CCCC) the importance of increasing complexity in critical thinking skills. He provided a handout that notes that scholars have determined, “after extensive research in the nature of expertise in many domains of knowledge, that the single most distinguishing characteristic of those who gain expertise in a variety of skills domains are those who continually assign themselves more and more complex problems to solve. For educators, this translates to a need for students to experience sequenced writing assignments within and across courses in which skills required to complete the task build upon previously acquired skills” (Beaufort 184).

Bean suggests having students engage critical and ethical issues in their major as potential writing topics. In *Engaging Ideas* Bean explains that the knowledge and skills required for writing what he calls “expert insider prose” involves “subject matter knowledge, genre knowledge, discourse community knowledge, information literacy, rhetorical knowledge, and writing process knowledge” (254). For

example, to engage in an important issue in their major, students in a natural science course could write on frequently encountered misconceptions about climate change (Bean 2013).

Departmental communities must then work together to create curriculum that focuses on the appropriate skills for their discipline. As Bean posits in *Engaging Ideas*, “When disciplinary faculty appreciate the complexity of academic research writing in general, and the specialized practices of their own disciplines in particular, they see why the skills required for undergraduate research need to be taught within the major” (262). While composition and general education courses can provide the foundation for the development of strong writing skills, it is in the capstone course that these skills can be brought to fruition.

Writing *enriched* courses such as the capstone are where all the elements of the FGCU Scholars initiative can culminate: in a discipline-specific scholarly project which includes elements of writing, critical thinking, and information literacy.

### **Assessment of Writing**

According to Doug Baldwin in “A Guide to Standardized Writing Assessment” (2004), “Since educators can use writing to stimulate students’ higher-order thinking skills—such as the ability to make logical connections, to compare and contrast solutions to problems, and to adequately support arguments and conclusions—authentic assessment seems to offer excellent criteria for teaching and evaluating writing.” Mary J. Allen, in *Assessing Academic Programs in Higher Education* (2004), emphasizes the importance of alignment to avoid redundancy or omission and posits that complex writing assignments should be assigned throughout the curriculum if we want students to write well (39-40). To summarize her ideas, she describes six steps for “successful assessment of writing across the curriculum”:

- Develop learning objectives
- Check for program alignment
- Develop an assessment plan



- Collect data
- Use results to improve
- Examine assessment processes. (39-73)

Allen further elaborates: “Capstone courses are obvious places to embed assessment. Program faculty could require students to finalize and submit portfolios in the capstone course, including it as a graded assignment. . . .Faculty could assess relevant learning objectives, and community professionals could be invited to contribute to the assessment effort. This event could promote and celebrate student learning, provide a context for important discussion between faculty and students, help students network with community professionals, and serve program assessment purposes” (59-60).

### **Rubric for Writing Assessment**

AAC&U’s VALUE project Written Communication Rubric is currently used for Composition Program Assessment. This rubric could be used in other general education courses and in the capstone course to provide a consistent assessment tool.

### **Conclusions**

Based on the literature reviewed, a model integrating writing instruction throughout the curriculum and within individual disciplines will provide a solid skill base for student success in their majors and, ultimately, in the capstone courses. Introducing students to university-level writing skills in Composition courses provides a foundation, but incorporating those skills and continued practice of such within a student’s major field of study will add meaning and value and also give students an opportunity to use and apply writing skills in ways that are practical and meaningful and that span the lifetime of their university education. Our vision of an integrated plan for writing instruction includes

- Writing *focused* courses, such as Composition I and II.
- Writing *intensive* courses, such as sophomore and junior level classes within the major.

- Writing *enriched* courses, such as the capstone course.

Based on best practices, shared responsibility and alignment of writing instruction and assessment should be developed between Composition faculty and faculty members in various disciplines. In addition, we should develop assessment of writing through varied means, as appropriate to the course and discipline, depending on whether courses are writing *focused*, *intensive* or *enriched*.

## Review of Literature: Critical Thinking

### **What is Critical Thinking?**

Critical thinking has been one of the core learning outcomes in American higher education since the late nineteenth century when the progressive educator and philosopher John Dewey (1859-1952) started to theorize the relationship between critical thinking in education and the development and survival of free and democratic societies. For Dewey, the school or university is a social institution that not only introduces the student to new forms of knowledge and vocational skills, but teaches them how to “live their lives” in a way that nourishes and cultivates the unique interests and needs of the student for the good of society as a whole. Central to this idea of self-cultivation is what Dewey, in his book *How We Think* (1998), calls “reflective thinking,” which he defines as “the kind of thinking that consists in turning a subject over in the mind and giving it serious and consecutive consideration.” (3). The central aim of this kind of thinking is to be able to critically distinguish between *mere* opinions or acculturated beliefs that individuals may have about particular subjects from forms of knowledge that have a strong logical coherence and a more demonstrable (or evidentiary) form of certainty. The upshot is a conception of critical thinking as a form of “metacognition” or “thinking about how we think” (Moore and Parker 2012). And, in a review of key literature on critical thinking, this notion of metacognition involves a number of overlapping aspects. First, it entails identifying background assumptions and presuppositions that may influence and distort our conceptions of truth and knowledge. Second, it involves critically assessing whether or not these assumptions are valid, accurate, or sound. Third, it involves uncovering the social, cultural, and historical contexts from which these assumptions emerge and engaging them from

multiple perspectives. Fourth, it remains consistently open to revision and self-correction. And finally, it may entail some type of focused, practical, and civically engaged action based on critical reflection (Bean 2011; Bok 2006; Brookfield 2012; Moore and Parker 2011; Nosich 2005)

### **The Role of Critical Thinking at FGCU**

At a time when they are bombarded with information from Internet sources like Wikipedia, from Twitter and Facebook, and from various blogs and media outlets, students must develop the ability to critically assess and differentiate *mere* opinion and belief from sound, evidence-based knowledge and reasoning. One of the “guiding principles” at Florida Gulf Coast University is to teach students how to be “informed and engaged citizens” in a way that is “committed to advancing democratic ideals.” Central to this guiding principle is critical thinking. The Delphi Report (Facione 1990) has a summary statement that captures the extent to which critical thinking is foundational to a well-rounded liberal arts education in general and to educational missions for institutions such as FGCU in particular. It reads: “Critical thinking is essential as a tool of inquiry. As such, critical thinking is a liberating force in education and a powerful resource in one’s person and civic life. While not synonymous with good thinking, critical thinking is a pervasive and self-rectifying human phenomenon. The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused inquiry and persistent in seeking results which are as precise as the subject and circumstances of inquiry permit” (Facione 1990). From this, we can see that critical thinking is a skill that not only allows students to develop well-informed opinions, make intelligent decisions, and identify the best course of action in various situations in life. It also enables students to recognize faulty or manipulative reasoning in others (Moore and Parker 2011, 2). Moreover, it is a skill that is common to all academic disciplines—from mathematics, business, and philosophy, to physics, history, and literature—insofar as the core concern is

to identify and question various uncritical assumptions and recognize how knowledge in that particular discipline is understood and interpreted as being legitimate (Brookfield 2012; Maki 2004).

### **Different Theoretical Approaches**

Insofar as it is applied in different ways in different disciplinary contexts, critical thinking is not a monolithic term. In *Teaching for Critical Thinking* (2012), for example, Stephen Brookfield identifies a number of different theoretical approaches including those found in philosophy and logic, natural science, pragmatism, psychotherapy, and critical theory. The most influential of these theoretical paradigms are those found in philosophy and in the natural sciences. In philosophy, the aim is to assess the nature of arguments (both deductive and inductive), test arguments for strength, soundness, and validity, identify logical fallacies, rhetorical fallacies, and valid inferences, and become fluent in a number of different kinds of reasoning and logic including deductive, inductive, formal, informal, and analogical. In the natural sciences, the aim of critical thinking is to identify as clearly as possible the relationship between cause and effect. The method, in this regard, is largely hypothetical and deductive, that is, one formulates a question; develops a hypothesis based this question; makes predictions based on the logical consequences of this hypothesis; tests the hypothesis by conducting experiments; and analyzes the results of the experiment to see if they support the hypothesis.

Although the theoretical paradigms of philosophy and natural science are the clearly the most influential in higher education, the tradition of pragmatism is also important insofar as it offers a conception of critical thinking that is grounded in concrete, experiential pursuits and focuses on “what actually works” in practical situations. The psychotherapeutic approach is also important by articulating the extent to which critical thinking plays a role in living a well-integrated, coherent, and authentic life. And the critical theory approach is significant in how it challenges authoritarian and oppressive socio-political structures, “speaking truth to power.” None of these theoretical approaches are mutually exclusive and all are useful in developing a robust, wide-ranging, and interdisciplinary conception of critical thinking for FGCU.

## Possible Critical Thinking Models for FGCU

There are a number of possible models that the university can use to develop student-centered critical thinking skills across the curriculum. One possible model, an “integrative approach,” would follow John Bean’s suggestion in *Engaging Ideas* (2011) that good writing is at the heart of critical thinking. Using carefully designed writing assignments and research projects, students can begin to integrate and apply the key skills of critical thinking. Writing assignments could be structured in ways that require students to recognize and define problems; identify, construct, and critically assess arguments; gather and evaluate relevant evidence; and anticipate counter arguments. And, given that FGCU requires a Capstone Course or Senior Seminar for all of its majors, there is an opportunity to assess critical thinking competency at the end of their coursework. (In the Philosophy Capstone Course, for instance, there is a “Philosophy Rewrite” assignment where students take a writing assignment from an earlier course, perhaps Composition I or II, critically assess it on the basis of relevant critical thinking criteria, and rewrite the paper accordingly.)

An important concern in any approach that takes writing assignments as the key assessment option is class size. In the literature review, a number of texts (e.g. Bok 2006; Brookfield 2012) recommended moving away from large lecture courses and focusing on small groups and seminars to sharpen critical thinking skills and to properly assess the clarity and argumentative rigor of writing assignments.

Another possible model is what might be called, the “solo approach” designed around a stand-alone critical thinking course required for all FGCU students (e.g. Moore and Parker, 2012). This could be viewed as an introduction to critical thinking that focuses specifically on the nature of technically sound and clear writing, identifying rhetorical devices and fallacies in reasoning, and testing arguments for their validity and truth-value. There are a number of possible advantages to this approach, one being standardization. Using a common text and assignments, faculty could draw on a uniform set of assessment and testing materials to evaluate competencies.

The biggest advantage of the solo approach, however, is also its biggest drawback. There are clear limitations to a fixed set of assessment measures as well as isolating critical thinking from the curriculum as a whole. The approach may allow faculty to gather a consistent set of data and compare student performance over time. But such an approach may compel faculty to “teach to the assessment” and prevent students from seeing how these skills apply across disciplines or address deeper questions regarding implicit biases, cultural context, and the mission of a liberal arts education in general. It may also diminish opportunities for different approaches to pedagogy and student-centered learning.

A final model, a “pedagogical methods” approach, could also be developed. With this model, instead of focusing specifically on writing assignments, faculty could develop a suite of model assignments and classroom activities that foster critical thinking skills in a way that can be implemented in content-specific contexts across all courses and programs (e. g. Maki 2004; Bean 2011; Nosich 2005). For example, every faculty member should have multi-step, problem-solving assignments in courses. Faculty could be taught how to structure these assignments in ways that explicitly strengthen and develop the critical thinking aspect of these assignments. In art courses, for instance, a student may be asked to develop a creative project for a studio assignment, and the instructor could restructure the assignment to add critical thinking features, e. g. a post-project analysis that asks students to reflect on their own process and what they would do differently, or where their decisions and choices could have been improved.

The same kind of approach could be applied to whole courses. Students could start courses with an assessment that they design by themselves based on what they know about the subject matter and how they could learn more about it. The course might end with a reflective assessment of their critical thinking process throughout the course, their own contribution to the process, and what they would do differently.

## **Conclusions**

Although the three models—the integrative, the solo, and the pedagogical methods approaches—are not mutually exclusive, based on the literature review and feedback from faculty, the committee decided that

for the QEP the integrative approach would be the best model for teaching and assessing critical thinking across the curriculum, using both horizontal integration (across the student's year of study) and vertical integration (across all four years of study). A consensus developed during the faculty forums that specific courses, such as Composition I and II, Gateway, and Capstone could be identified as having critical thinking as the central learning outcome.

### Review of Literature: Information Literacy

#### **What is Information Literacy?**

Definitions for information literacy date back to 1914 and have evolved over the decades, but all definitions contain some common elements. Each definition mentions possession of an integrated set of skills, knowledge of resources from which to retrieve information and the ability to analyze and use information (Association of College and Research Libraries, 2000; Burkhardt, MacDonald & Rathemacher, 2005; Gibson, 2008; Rockman, 2004). Currently, the Association of College and Research Libraries (ACRL) (2000) defines information literacy as the ability to “recognize when information is needed and ... locate, evaluate and use effectively the needed information.” Grassian & Kaplowitz (2001) encourage the addition of the individual in contemporary definitions; they advocate for the inclusion of dispositions like persistence, attention to detail and caution in accepting information. However, according to all definitions whether academic or personal, information literacy includes the skills, dispositions, and abilities necessary to be a productive individual in a “technologically sophisticated global society” (Rockman 2004, 25).

#### **Why is Information Literacy important for FGCU Students?**

The 21st century has been proclaimed the Information Age characterized by a constant barrage of information from a plethora of sources. This explosion of information makes it nearly impossible for students to learn everything needed for a lifetime of success during one's years of formal schooling. Therefore, teaching students to be information seekers and managers is a practical twenty-first century

educational goal and necessary personal disposition. The ability to find, analyze, and use information is essential in a democratic society and global culture since information literacy skills equip one for a lifetime of independent learning and personal empowerment. The findings in Education Testing Service's 2006 Information and Computer Technology Literacy Assessment indicate most of the 6,300 high school and college students tested did not demonstrate basic information literacy skills. The results of this and other national assessments challenge universities to create opportunities for their students to learn, reinforce and use information literacy skills.

Information literacy skills are often talked about in proximity to discussions of lifelong learning and the ability to perform well in the modern workplace. ACRL (2000) explains that, "Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning." Information Literacy was recognized at a national level in 2009 when President Obama proclaimed October National Information Literacy Awareness month, saying, "An informed and educated citizenry is essential to the functioning of our modern democratic society, and I encourage educational and community institutions across the country to help Americans find and evaluate the information they seek, in all its forms."

### **Theoretical Framework and Best Practices**

There are many learning theories which attempt to explain how people learn and no single theory or theorist can be singled out as having the complete answer to this question. However, the all-inclusive learning theory of constructivism describes the process of creating meaning from a variety of sources and experiences which is integral to information literacy pedagogy. Constructivism embraces elements from a number of learning theorist from Dewey (2009), Vygotsky (1978), to Pau and Elder (2006). The Boyer Commission Report (1998), *Reinventing Undergraduate Education*, recommends capstone experiences and projects that engage students in "framing of a significant question or set of questions, the research or creative exploration to find answers, and the communication skills to convey the results" (27). As the



foundation for life-long learning and personal empowerment, information literacy pedagogy is deeply supported by the constructivist learning theory and its conceptual framework that knowledge is actively constructed out of the learner's experiences in the world. Constructivism also embraces the role of affect in its principles as learners are more likely to become cognitively engaged when they are researching something which has personal meaning. This tenant of constructivism supports the inclusion of the individual in contemporary definitions of information literacy embraced by Grassian & Kaplowitz (2001). The ACRL Information Literacy Standards for Higher Education integrate self-directed learning, active engagement on the part of the learner and the construction of new knowledge from a variety of resources and experiences into each of its five standards. The ACRL Standards for information literacy are widely accepted and used in institutions of higher learning throughout the United States as the basis for information literacy instruction and evaluation.

Linking theory and practice enables educators to improve curricular content and develop new and effective instructional approaches. The Boyer Commission Report (1998) challenges universities to structure courses to create student-centered learning environments based on inquiry where problem solving becomes the focus and where information literacy competencies are required for success. The Boyer Commission (1998), ACRL (2000), Grassian & Kaplowitz (2001) advocate for an integrated curriculum where information literacy strategies are taught and standards are woven into "curricular content, structure and sequence." This integrative approach offers multiple possibilities for students to use critical thinking skills, to become skilled users of information sources and increases personal responsibility for learning. An integrated approach provides multiple and consistent opportunities for students to seek, evaluate and manage information gathered from multiple sources and to practice discipline-specific research methods.

ACRL has written best practices for information literacy programs that include recommendations that information literacy be fully articulated within the curriculum, building from entry level skills up through more complex concepts through a student's career, while being embedded in regular coursework within each academic program, discipline and course (Association of College and Research Libraries

2012). These best practices also recommend that assessment of student learning be carried out in multiple ways, including pre/post tests, portfolio assessments, quizzes , and observation.

The Middle States Commission on Higher Education, the accrediting body similar to SACS for the mid-Atlantic states region, has put in definitions and expectations for information literacy competency into their accreditation standards document (Middle States Commission on Higher Education 2006), saying that “information literacy is an essential component of any education program at the graduate or undergraduate levels.” Middle States has also published extensive guidelines specifically for integrating information literacy in the curriculum (Middle States Commission on Higher Education 2003) that encourages member institutions to incorporate information literacy instruction into their existing courses using an “Integrated or Distributed” model, as opposed to a “Separate or Compartmentalized” curriculum model, meaning that information literacy education should be “blended seamlessly into upper-level courses” instead of being put solely in a general education program that would not offer an opportunity to let students develop higher-order information literacy skills. Many faculty already teach concepts of information literacy in their courses, even if they don’t label them as such, so it makes sense to build upon the structures that are already in place. Examination of the curriculum should be done to see where instruction happens already and whether additional instructional content is necessary. Middle States also acknowledges the need for professional development and training for faculty to get them prepared with the right tools and information to teach and assess information literacy.

Jarson’s 2010 essay “Information Literacy and Higher Education: A Toolkit for Curricular Integration” highlights different delivery methods of instruction for information literacy: comprehensive information literacy plans, course-integrated library instruction, discipline specific information literacy, embedded librarianship, and first-year experience programs. He reviews College of DuPage’s Information Literacy Across the Curriculum (ILAC) program which cites several elements as characteristics of a successful ILAC program; they

- connect to the goals and educational philosophy of the College;
- receive library and college administrative support and financing;

- engage discipline and library faculty in a common goal of information literate students;
- rely on a set of information literacy standards to establish curriculum and assess learning, like the Association of College and Research Libraries Information Literacy Competency Standards for Higher Education (2000);
- consist of a sequential progression of learning opportunities that are linked to the core curriculum across academic programs or disciplines;
- assess learning at all levels: pre- and post at the institutional, program/discipline, and course levels; and
- enjoy a sustained infrastructure of staffing and technical support.

With the support of a grant, Carleton College integrated Information Literacy into the curriculum and have made public their reports on how faculty in the disciplines can create their own rubrics, learning outcomes, and assignments to teach information literacy

<http://apps.carleton.edu/campus/library/about/infolit/projects/mellon/mellonoverview/>.

### **Assessment Options and Models**

Megan Oakleaf, in “Dangers and Opportunities: A Conceptual Map of Information Literacy Assessment Approaches,” offers several pieces of advice and feedback on assessing information literacy. She notes that

- Fixed-choice tests are easy because they gather lots of data quickly, compare students, compare pretests to posttests, can be made highly reliable, cheap and easy to administer and score, widely accepted. Limitations are that they measure recognition rather than recall, do not measure higher-order skills, do not measure behavior or performance, do not facilitate learning
- Performance assessments, such as citation/bibliography analysis, portfolio assessment, and iSkills test, capture higher order thinking, align with learning goals, integrate learning and assessment,

facilitate transfer of knowledge, and supply valid data. They can also be costly to create, administer and score and have limited generalizability.

- Rubrics (like the AACU VALUE rubrics) articulate and communicate learning goals, focus on higher-order thinking and skills, make scores and grades meaningful, provide direct feedback to students, facilitate consistent scores, deliver data that is easy to understand, defend, and convey, can be used over time across multiple programs. They can be difficult to construct well and require time for development and training.

In addition to these assessment models, standardized tests for information literacy exist, including the assessment available through Project Sails and the “iSkills” assessment from ETS. Finally, James Madison has developed an information literacy test that is also very strong. In terms of rubrics, along with the AAC&U rubric, the Institute of Museum and Library services has developed a Rubric Assessment of Information Literacy Skills (RAILS) which “helps librarians assess student information literacy skills exhibited in ‘artifacts of student learning’ like research papers, presentations, worksheets, portfolios, or reflective journals. Using the AAC&U VALUE rubrics and the Information Literacy Competency Standards for Higher Education as starting points, RAILS assists librarians who seek to create campus-specific rubrics, ‘norm’ them for use with multiple rates, and gather results data that inform instructional improvements.”

## **Conclusions**

Based on the literature and best practices, an integrated model of teaching and assessing information literacy throughout the curriculum and within student’s regular coursework is the most successful and effective method. Contextualizing information literacy skills and concepts within a student’s major field of study or chosen coursework adds meaning and value to those skills and also gives students an opportunity to use and apply information literacy skills within their disciplines. An integrated information literacy program at FGCU might include:

- Information literacy competencies based on the ACRL Information Literacy Competency Standards for Higher Education with tiered expectations for freshman, sophomore and junior/senior levels;
- Introduction and practice of IL concepts and skills through librarian-led sessions, classroom lecture and activities, online modules, and research and writing assignments, most often as part of regular coursework; and
- Assessment of IL competency through varied means including authentic performance assessments of research papers or portfolios using rubrics and standardized tests.

Most importantly, a successful IL program would include shared responsibility for the teaching and assessment of information literacy between library faculty and faculty members outside of the library.

## **V. Implementation and Assessment**

## **VI. Oversight and Budget**

## **VII. Conclusion**

Forthcoming, Fall 2013.

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