

3.7 Infrastructure and Resources to Support Students and Faculty

Our QEP also entails developing infrastructure and resources to support students and faculty that can be divided into two major categories:

- Databases for the *Discovery-Based Learning Initiative*
- Infrastructure Support from Resource Collaborators

3.7.1 Development of Databases for the Discovery-Based Learning Initiative

In addition to administering the various grant programs, the Office of Undergraduate Discovery Programs will coordinate central services for students and faculty, including developing and maintaining four databases (Table 10). The searchable databases, coupled with an online repository of research-related training modules and tools, will provide a mechanism for the Office of Undergraduate Discovery Programs to make resources available campus-wide and remotely. The Office will serve as a match-maker between research project sponsors and prospective student participants.

Table 10

Databases of the Discovery-Based Learning Initiative

Database	Description
On-Campus Research Opportunities	Database allows faculty, campus offices, institutes and centers to post available research opportunities including work-study research internship positions. On-campus opportunities may be voluntary, credit-bearing, or stipend-supported research positions. Students will also be able to post their resumes for potential mentors to review.
The Houston Research Internship Opportunities	Database provides a means for posting research internship positions offered by Houston-area industry and research institutions. Off-campus internships include mentored research opportunities at local institutions, the Texas Medical Center, NASA, or local companies. Both undergraduate and graduate students will benefit from this resource.
The Real-World Team Projects	Database enables campus offices, local industry, community clients, non-profit organizations, and K-12 schools to post team projects that students can address under the guidance of a course instructor. This will serve as a central repository for campus projects, collaborative industry projects, service learning projects, and capstone projects.
Reality Chats Speakers Bureau	Directory enables local professionals or scholars to volunteer to share their research and career experiences with students. Since 75 percent of our alumni remain in the Houston area, the Reality Chats provide an opportunity for them to re-engage with their alma mater, helping bring the real world to our students. Faculty or student organizations will coordinate scheduling registered speakers through the Office of Undergraduate Discovery Programs.



3.7.2 Infrastructure Support from Resource Collaborators

The *Discovery-Based Learning Initiative* will increase available infrastructure for students and faculty. The key to this support is teamwork among the QEP implementation partners: the newly created Office of Undergraduate Discovery Programs and our existing resources and agencies – including the Writing and Communication Skills Center, the Libraries, the Office of Educational Technology and University Outreach, the Office of Undergraduate Research, and the Office of Institutional Research and Institutional Effectiveness – which already provide substantial facilities, resources, and programs. The enhancement comes in the synergy of Office of Undergraduate Discovery Programs coordination of resources, linking the implementation partners and other resources into an interconnected infrastructure that supports students and faculty. The processes for allocating resource support will, among other alternatives, be through three grant mechanisms:

Research-Supportive Curriculum Development – In collaboration with the QEP Resource Collaborators, faculty or academic units can include custom-designed resources or modules in their proposals as part of existing or new courses. Some degree programs may choose to concentrate their research requirements and opportunities in select courses, while others may distribute research as widely as possible, but any course at the core, intermediate or advanced levels will benefit from curricular review and enhanced assignment design.

Resources for Student Development – Academic units can include custom designed resources in their proposals as a key component of department- and college-wide student training programs in skill areas such as research ethics, information literacy, and oral and written communication. This horizontal delivery of research-related skills will be encouraged since it has the potential to impact a high number of students. In addition, the QEP Resource Collaborators or other offices on campus can initiate proposals which provide funding to develop stand-alone course modules, workshops, or online tutorials for student research-related skills development.

Resources for Faculty Development – The Resource Collaborators and other offices on campus can develop proposals that provide resources and workshops for faculty in the areas of curriculum design, implementation of research-based pedagogy models, instructional technology, and assessment.

Resource Collaborators Index

Examples of the types of support that the implementation partners can provide are outlined in Tables 11-15. They include support for the improvement of student communication and information literacy skills, use of instructional technologies, mentored research programs, and assessment of QEP student learning outcomes and goals.



Table 11

Communication Skills Development Support

Support for Research-Supportive Curriculum Development	
College Writing Programs	All majors in the college matriculate through the Writing Center in multi-staged writing programs. Participating Colleges: UH Law Center, C. T. Bauer College of Business, College of Pharmacy, and the Conrad N. Hilton College of Hotel and Restaurant Management. A future option for all colleges
Writing in the Disciplines Courses (WID)	Institutionally Designated Option (IDO) core requirement: three credit hours "Writing in the Disciplines." Colleges and departments can increase writing instruction in their discipline while adding content coverage by designating courses as WID
Discipline-Specific ENGL 1304: Freshman Composition II Courses	Discipline-specific course that fulfills the ENGL 1304 Core requirement, contextualizes the second-semester composition course
Linked Course Partnerships	Cohorts of students simultaneously enrolled in content area courses and English composition courses
Curricular Mapping	Review college curricula and identify opportunities for increased writing practice and instruction
Support for Student Development	
Undergraduate Research Writing Workshops	Familiarize students with literature review, research report writing methods, styles, formats, and conventions for publishing within their discipline
Writing Workshops	Instruction on general writing topics and hands-on student exercises. Examples: Academic Honesty: Working Ethically with Sources, Revision Strategies for Non-Native Speakers, Entering the Conversation: Learning the Language of Scholarship
Assess and Address Writing Support	Assessment of discipline-specific writing and follow-up program of writing tutorials for selected students
Writing Studios	Small groups of students meet weekly with a writing consultant to discuss the writing process for course assignments
Assignment-Specific Writing Consultations	One-on-one consultations with peer tutors provide support in writing and revision process for course writing assignments
Oral Communication Support	Group or individual practice and consultation sessions utilizing technology and practice rooms available at the Writing Center
Support for Faculty Development	
Research-Based Assignment Design	Experts in pedagogy consult with faculty on writing assignments, ensure expectations and evaluation criteria effectively communicated
Evaluation Rubric Design	Staff assists faculty to establish appropriate expectations, and to clearly state them in the flexible and practical form of rubrics
Oral Communication Support	Input on the design of oral presentation assignment prompts and evaluation rubrics
Teaching Assistant Training	Training for teaching and instructional assistants, to support the application of consistent standards for grading



Table 12

Information Literacy Skills Development Support

Support for Research-Supportive Curriculum Development	
Assignment Consultations for Faculty	Research librarians collaborate with faculty on assignments to help build students' information literacy skills
Course-Embedded Librarian Consultant	Research librarians keep faculty current on relevant resources
Course Library Instruction	Information resource instruction tailored to content and assignments
Information Literacy Skills Training for Research-Intensive Courses	Students in capstone or practicum classes learn to pull together information from many sources, synthesize, and apply it to solving a problem in an ethical and legal manner
Support for Student Development	
Special Collections Library Instruction	Special Collections librarians introduce students to rare books and archival materials
Subject Portal/Websites	Research librarians build electronic subject portals for courses and/or disciplines, increase access to research tools, resources, and library services
Open Workshops for Students	Including basic introductions to library resources and services, use of specific databases, patent research, and use of reference management tools
Online Tutorials	Online tutorials – text-based or multimedia videos – demonstrate research concepts, information resources
Support for Faculty Development	
Faculty Development Workshops	Workshops covering topics such as Special Collections, information literacy-based assignments, assignments that help students avoid plagiarism, EndNote and other reference and citation management



Educational Technology and University Outreach

Table 13

Instructional Technology Support

Support for Research-Supportive Curriculum Development	
WebCT Vista	Course management system supported by the University, over 1,200 sections and 28,000 student enrollments, includes learning modules to develop QEP core competencies. Platform for delivering QEP assessment instruments for research-intensive courses
Electronic Portfolio System	ETUO and Writing Center recently piloted iWebfolio, an electronic portfolio system. With WebCT, e-portfolios can showcase student research projects and provide vehicle for program-wide assessments
Wimba Virtual Classrooms	With the best elements of face-to-face and online instruction, Wimba Classroom provides a fully featured live classroom environment, supports audio, video, application sharing, and content display
Turnitin.com/GradeMark	GradeMark tools extend functions beyond plagiarism detection, supporting teaching, facilitating consistent and clearly-communicated evaluation of writing
Student Response Systems (Clickers)	eInstruction Classroom Performance System ("clickers"): remote-controlled, real-time classroom polling system, enables instructors to check student understanding, make lectures more interactive
Podcasting	Inexpensive, easy-to-produce multimedia instructional tool to deliver lectures and disseminate course materials
Support for Student Development	
Student Podcasting	Students disseminating their research work and findings via podcasts to the University community and beyond
Wimba Virtual Classroom - Study Rooms	Students create private online study rooms, meet to plan presentations, complete team assignments, prepare group documents/reports
Support for Faculty Development	
Instructional Designers	Instructional designers provide consultations with faculty on best practices for developing course material and using instructional technologies
Faculty Development Workshops	Workshops and training on instructional technologies and tools in classroom instruction, hybrid, or online courses
Faculty Development Initiative Program (FDIP)	Grant program for faculty enhancements of courses using instructional technology
Faculty Showcase	Events give faculty opportunity to present their work utilizing technology
Graduate Technology Assistants	Graduate students provide immediate support with scanning, creating PowerPoints, WebCT, etc.



Table 14

Mentored Research Support

Support for Student Development	
University Stipend-Supported Mentored Research Programs	Administration of the University's stipend-supported mentored research programs (SURF and PURS). Offers student advising and help with matching to faculty mentors
Senior Honors Thesis	Administration of the Senior Honors Thesis programs, coordinating review of thesis proposals, tracking student progress, compliance to thesis requirements
Lecture Series for Mentored Undergraduate Research	Lecture series for students participating in mentored research, presentations on conducting a literature review, research ethics, research activities taking place at UH, applying to graduate and professional school, student panels
Undergraduate Research Summit	Collaboration with the Office of Undergraduate Discovery Programs, to implement University-wide showcase of student research and creative activities

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Table 15

Assessment Support

Support for Research-Supportive Curriculum Development	
Data Access	Extraction and use of appropriate institutional data related to QEP assessment
Assessment Instruments	Assessment staff work with faculty teams, develop instruments for assessing QEP student learning outcomes
Data Analysis	Quantitative and qualitative data analyses and associated reports
General Education Assessment	Coordinate assessment of general education core competencies in critical thinking, information literacy, and writing skills, facilitate alignment of general education assessment with QEP assessment
Support for Faculty Development	
Assessment Training	Workshops, training sessions for faculty who develop new research-intensive courses to include course-based assessments
Rubric Development Support	Facilitate rubric development with faculty committees charged with identifying standards for QEP outcomes