

Model Proposal for QEP: Backward Design for Enhanced Educational Outcomes

Submitted by: Anne- Marie Bouche, Jackie Greene, Stacey Parker and Linda Serro

Introduction.

Our proposed model suggests implementing two new assessments within the undergraduate curriculum, one at the General Education level and one at the program / department level. These assessments are intended to integrate smoothly with the existing curricular structure and to add value without imposing significant distortions or burdens to existing programs.

The first assessment would occur soon after students arrive at FGCU, and would be part of a general education college-readiness experience, either in an existing course or in a specially-developed course.

The second assessment would be done when students are well advanced but right before they embark on their capstone project or course experience, depending on the department or major.

Both assessments would be reality-based, problem-solving “challenge”-type activities that students could undertake in groups.¹ They would be open-ended, holistic projects requiring students to use general critical thinking, analysis, information literacy and communications skills, as well as the specialized content knowledge appropriate to the immediate context.

The first project would provide a baseline assessment of where students are when they arrive at FGCU; the second one would measure the change that occurs between the entry point and the moment when they are ready to start their capstone experience.

The thought behind this approach is this: if departments and programs know that their students will be assessed for higher-order critical thinking, analysis, problem-solving and communications skills, and there are consequences attached to those assessments, or rewards that result from them, then there will be a strong incentive to plan courses, assignments and program activities to achieve the desired results in those areas. By creating a challenge that embodies the desired set of broad skills we want students to acquire, we effectively, but non-coercively, create a goal towards which curriculum and courses can be designed.

In many areas of the University this is already happening; all this would do is extend it across the board and make it more explicit and conscious. Most faculty members will have experienced this phenomenon firsthand. If we know that our students are going to have to do an independent capstone project involving (let us say) library research, data collection and statistical analysis, we will tend to include activities and assignments in our courses that prepare them to succeed in these skill-areas.

¹ Since the goal is to assess over-all improvement of the student body rather than the academic progress of individuals, group problem-solving projects are appropriate. Collaborative projects in fact more closely model the real-world challenges and skills that students will face when they graduate.

In contrast to standardized testing or external assessments that are done after the fact, challenge-type problem-solving experiences are in themselves profitable for those who participate. Students learn and grow from the experience of solving complex problems; giving them opportunities to do so that are broader than a single course and that use the skills we feel are most important will give us something that can be meaningfully assessed, while delivering a clear educational benefit to those who are undergoing the assessment.

We began therefore with the outcomes: what do we want our students to be like when they graduate? What skills and intellectual qualities do we want them to have acquired? How can we design a Quality Enhancement Plan that will be practical, effective, appealing to stakeholders, valuable to students, and at the same time can be assessed in a way that not only gives us valid and useful data, but that genuinely promotes and furthers the objective of improving undergraduate outcomes in the targeted areas?

Many existing assessment methods (including some currently in use on this campus) only capture a small subset of what students actually learn in a liberal arts setting over the term of their education. Our model, and its assessment, captures broad qualities of mind and integrated systems of knowledge and skills that are often difficult to assess.

By giving our students problem-solving challenges that actually use the skills we are trying to teach, we are not just reinforcing those skills, but also giving curriculum and course developers incentives to buy into the plan and contribute to it.

Benefits for FGCU.

We believe that the model will be motivating to students, because such activities can be designed to be intrinsically rewarding. Students respond very positively to game-like, entrepreneurial, or contest-type challenges, especially when there are incentives involved that showcase or reward the most successful projects.

Giving students a baseline assessment that exercises skills targeted in General Education courses is one way of demonstrating to students in advance why these skills are useful and necessary. So often, students do not know why they are required to take certain classes because they cannot see the end product in advance. Having students focus this initial assessment on the process of learning itself, and their own engagement with learning, will enhance their understanding of what college is all about.

In a similar fashion, if programs and departments can tailor the second, “end” assessment to the real-world content of their fields, they can use it to strengthen student preparation for independent work. Giving students an opportunity to do a smaller problem-solving project will make it more likely that they will succeed in and benefit from their capstone experiences. The campus as a whole benefits because this model leverages existing strengths by giving students an additional, more holistic opportunity to apply the communications, critical thinking, information-acquisition and analysis skills they are already learning. If implemented, should add value to what is already being taught successfully on campus, allowing us to capitalize on our existing curricular strengths.

Rationale for Backward Design Model.

Educators have often started to plan a curriculum by choosing a text, developing lectures and activities based upon the text and then assessing the knowledge gained from the course or curriculum. This assumes that assessment is something that we do at the end of the course or program of study. This all seems

logical, but there is the danger that our assessment measures do not really match the learning that happened leading up to the assessment or the assessment doesn't assess what we actually taught. Using textbook assessments that may contain language that we never used when the concept was taught in class is another example of a mismatch between curriculum and assessment. Would it not be better to start with the assessment first and then plan lectures and activities that prepare the student to be successful on that assessment? We are not suggesting "teaching to the test", rather we suggest instructors provide many opportunities to learn the content and to be cognizant of what instructors would accept as evidence that our students have attained the desired learning outcomes prior to planning the teaching experiences. Further, we believe that the same principles and the same logic can be applied to undergraduate education as a whole.

The idea of backwards planning is not new. Ralph Tyler (1949) advocated for backward design 63 years ago in his seminal work on curriculum planning. "The purpose of a statement of objectives is to indicate the kinds of changes in the student to be brought about so that instructional activities can be planned and developed in a way likely to attain these objectives" (p. 45). More recently, Wiggins and McTighe (1995) have coined the phrase "backward design" in relation to curriculum development utilizing three stages:

1. Identify desired results.
2. Determine acceptable evidence.
3. Plan learning experiences and instruction.

We are suggesting using this 3-step model to guide the planning and implementation of the QEP. In the next sections we will discuss each step and give an example of how it might work.

Identify desired results.

Stephen Covey (1989) in his book, *The Seven Habits of Highly Effective People*, stated:

To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you're going so that you better understand where you are now so that the steps you take are always in the right direction.

What should our graduating students know, understand and be able to do? To answer this we looked at the goals of this QEP:

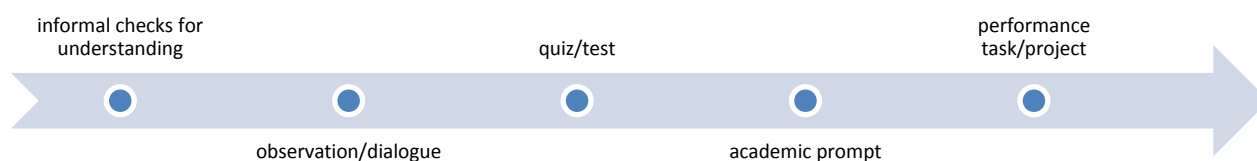
- Students will perform better in writing and critical thinking in General Education and in the majors.
- Students will demonstrate consistent improvement in writing, critical thinking and information literacy.
- Students will graduate with improved readiness for professional practice.

These goals are very broad and would need to be operationalized. For example, what content facts, concepts, and principles related to these goals represent the "big ideas" that have enduring value beyond the classroom? How can we develop activities and programs that can be implemented with all students in all subject-areas, which will engage all programs and departments, and will achieve stated goals related to writing, critical thinking and information literacy? Finding common ground is a critical first step in the process, which must occur before any Quality Enhancement Plan model can move forward.

We see this initial step including discussions across campus in content areas, departments, faculty meetings, etc. to narrow down key concepts that everyone can support in writing, critical thinking and information literacy.

Determine acceptable evidence.

Wiggins & McTighe argue that once we know what we want students to know and be able to do, we must next “think like an assessor” before planning specific activities to teach the content. They believe that there is a continuum of assessment methods before reaching the summative assessment:



For sake of discussion, we will provide an example of a pre-assessment for entering students and a post-assessment for students during their first semester senior year. We provide an idea for the summative assessment first, since we are beginning with the “end in mind”.

Performance/Task: **Creative Problem Solving Project.** A course in each major will be identified that students take during their first semester senior year that prepares them for their capstone project. Students will work in small teams to solve a problem in the field. This project would not only address the content of the QEP but be innovative and challenging. What might such a project look like? Here are a few examples that we developed. The pre-capstone project would be designed within departments and programs in accordance with program-specific content and goals. The following examples are thus only a “placeholder” to give an idea of the type of project that might be appropriate.

Teams of environmental science majors, for example, might be given the challenge of evaluating a part of campus and developing a plan (expressed as a written report) to improve its environmental quality. Education majors could be asked to develop innovative course materials based on recent research into human memory formation and human cognition. Art students could be asked to develop creative projects in a curatorial context involving research, writing, preparation and display. All students involved in these types of projects could be expected to produce certain standard elements that all subject-areas would have in common. They would be evaluated on the quality of the project and the quality of their writing through an individual reflection on the experience. For both parts a rubric would need to be developed. Some of the skills assessed may include:

Ability to work in a team, contribution to the project, resources, independent thinking, ability to ask good questions, strategy used to solve the problem, professional writing, meta-processing of experience, ability to express self and support ideas in writing, and use of broad knowledge areas to solve problem. This is just a broad sweep at what might be evaluated in the project but it depends upon the content and big ideas that are developed in Step 1. Faculty would be consulted in each major to determine the best course to include this “mini capstone”.

In the model we are suggesting, the beginning of program or pre-assessment must look very much like the ending one, Creative Problem Solving Project, so that we can track growth in the areas of writing, critical thinking and information literacy. We thought about a similar project that would take place during the student’s first semester with us. However, how could that be handled when students enter as freshman or transferring in as juniors or maybe sophomores? After discussion, we envisioned some course that all “new” students take their first semester with us that gives an introduction to the components of what we established in step 1: operationalized goals. That may include critical thinking, information literacy, value

of written expression, how to analyze information in different disciplines, team work, etc. All of these students would participate in a **Creative Problem Solving Project** with the theme of learning as the culminating activity for the course. Here's an example for this entry level project:

In this class we have examined college-level expectations for writing, critical thinking and information literacy. With your partner, choose a topic from the curriculum and devise a creative way to teach it that includes a variety of resources and an activity that will engage your classmates in the material. You must develop a rationale, goals, rubric, and examples for your project activity. Each of you will individually write a reflection on the process of developing this project and what you learned about yourself in the process. Both your project and reflection will be scored against a rubric which will be provided to you prior to beginning the project. Be creative, think outside the box, and engage the class in the learning activity. Students would be asked to complete the task but at a more general, exploratory level using the rubric developed for the ending Creative Problem Solving Project but not expecting all students to be wildly successful but immersed in the process. The purpose would be to gather baseline information on their level of skills in the areas listed in the syllabus.

It would be important to establish inter-rater reliability for the rubrics used so faculty involved in the courses identified to house the two assessments would need to be part of that process.

We could possibly host a showcase of the mini-capstones and possibly video-tape the entry level projects that happen in the classroom to share with others.

The effectiveness of this model would be enhanced if both the "baseline" and "exit" activities had as a common theme a self-reflective or meta-cognitive component. Every student would, individually, have to provide some post-project reflection on the process and the outcome; how they planned and executed the project, where they felt they needed more information, which skills they used and which ones they wished they had, what difficulties and setbacks they experienced and how they overcame them, how social and interpersonal aspects of group work enhanced the outcome or, conversely, where difficulties occurred; what steps the student would take if given the same task again, with the same participants, to improve the outcome or the process for themselves personally and for the group.

Plan learning experiences and instruction.

Only now are we ready to plan the learning experiences and instruction. We know what we want students to know and be able to do; we've got assessments developed, so how do we get to the "end"? This step would require input from the faculty at large. Where are these skills currently taught? What learning experiences do we need to develop for our students to prepare them for the summative assessment? Where can these experiences reside? The curriculum map that would result would demonstrate where these skills are introduced and then where along the four-year continuum they are reinforced as the student moves toward the "mini Capstone" project.

To widely implement this QEP would require providing professional development for all faculty members to understand the scope and sequence of the project and strategies to accomplish these goals. For instance, if we select *Engaging Ideas* by Bean as a methodology source for integrating writing and critical thinking across the curriculum, all resident and adjunct faculty members would be given a copy. The Teaching, Learning and Assessment Initiative (TLAI) could support workshops on implementing the strategies, video examples or our professors implementing the strategies for others to view, and establish faculty learning communities to discuss the strategies and how they are working in the classroom.

It will be very important to include all faculty members, including adjunct faculty, if we truly mean “across the curriculum.” The implication is that this QEP does not reside in a “course” but within all of our programs from start to finish. It takes a village to raise a child...it takes an academic community to raise a thinking professional who graduates from FGCU.

Summary

Backwards Design Process includes 3 steps plus professional development.

1. Identify specific goals/big ideas/content and confirm them across all programs of study.
2. Develop an assessment plan with a rubric that includes the assessment of our identified goals/big ideas/content while keeping it generic enough to be applied to prompts developed in different programs.
3. Consult with faculty about where the learning can occur and be reinforced across programs. Develop a curriculum map and scope and sequence.
4. Provide faculty with strategies that will promote learning.
5. Implement learning activities and assessments.
6. Evaluate student growth.

References

Bean, J. (2011). *Engaging ideas* (2nd. Ed.) San Francisco: Jossey-Bass.

Covey, S.R. (1989). *The 7 Habits of Highly Effective People*. New York: Simon and Schuster.

Tyler, R.W. (1949). *Basic Principles of Curriculum and Instruction*. Chicago: University of Chicago.

Wiggins, G. & McTighe, J. (2001). *Understanding by Design*. Upper Saddle River: Prentice-Hall, Inc.