Redesigning a First Year Seminar for Sustained Impact

Melinda Mechur Karp, Ph.D.,
Asst. Director, Community College Research Center, Teachers College, Columbia University

Nancy Ritze, Ph.D.
Dean, Instructional Research, Planning, and Assessment, Bronx Community College, NY
Prior research
Student success courses are associated with positive outcomes.

As compared to similar peers, participants have:

- Higher rates of persistence
- Improved academic performance
- Increased likelihood of completion

Cho & Karp, 2013
But, these effects tend to fade over time.

Fade-out is particularly evident in studies using rigorous, causal methodologies.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Impact?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits earned after two semesters</td>
<td>Yes</td>
</tr>
<tr>
<td>Two-semester GPA higher than 2.0</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of semesters enrolled in college over four years</td>
<td>No</td>
</tr>
<tr>
<td>Credits earned after four years</td>
<td>No</td>
</tr>
<tr>
<td>Continued enrollment or degree earned after four years</td>
<td>No</td>
</tr>
</tbody>
</table>

Weiss et al., 2011
Qualitative research finds that most student success courses

- Focus on content coverage
- Are teacher-directed
- Engage in information delivery but not application of learning

Learning theory asserts that solely exposing students to content and new skills does not encourage knowledge retention and long-term use.
Conceptual framework for an optimized student success course

Pedagogical Processes
- Content made relevant to student needs, goals, and interests
- Learner-centered teaching strategies
- Classroom environment that supports relationship-building
- Opportunities for student practice

Student Outputs

Application
- New knowledge about academic habits, student success skills, and available campus resources
- Self-awareness of how and when to use skills and access resources
- Agency and motivation to use the skills and access resources
- Comfort with campus and college life
- Social and academic integration

Karp et al., 2012
First Year Program and Seminar at Bronx Community College
Bronx Community College (BCC) Profile

- Part of the City University of New York (CUNY) – the nation’s largest urban public university
- **Enrollment** (credit) – approximately 11,000 students
- **Degree Distribution** – 61% transfer (AA/AS), 39% career (37% -AAS, 2% certificates)
- **Most common majors** – liberal arts, business, allied health (nursing)
- **Specialized majors** – biotechnology, dietetics and nutrition, criminal justice, media technology, digital design & computer graphics, telecommunications technology
BCC Student Profile

- **Ethnically Diverse** (61% Hispanic; 33% Black –Africans, African Americans, Caribbean; more than one-third (39%) immigrants from more than 100 countries)

- **Academically Underprepared** (18% enter with GED; 90% require remediation; one-quarter require remediation in all 3 skill areas: reading, writing and math)

- **Demographic Risk Factors** (41% with median household income<$15,000; 31% supporting children; 51% employed; 47% non-native English speakers; 27% are first in family to attend college)
# BCC First Year Initiative Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity</th>
<th>Number Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Institutional Self-Study/Literature Review</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>Course &amp; Program Development/Pilot</td>
<td>150</td>
</tr>
<tr>
<td>2013</td>
<td>Course &amp; Program Expanded/Staff Hired/CCRC Study</td>
<td>418</td>
</tr>
<tr>
<td>2014</td>
<td>Course Approved by College Senate</td>
<td>700</td>
</tr>
<tr>
<td>2015</td>
<td>Course &amp; Program Expanded/Engaging FT Faculty</td>
<td>1087</td>
</tr>
</tbody>
</table>
Factors that Contribute to Lack of Student Success in the First Year at BCC

1. Institutional/Curricular Organization
2. Student Disposition
3. Ineffective Pedagogy
4. Insufficient Academic Supports
Theoretically and Empirically-Driven Recommendations

- Appropriate course selection and sequencing
- Promote student engagement and knowledge of college expectations
- Promote faculty use of engaged and effective pedagogies
- Create a cohesive first year experience (in and out of classroom)
- Built-in accountability
- Embedded program and student learning assessment
- Multiplicity of experiences matching student needs (ESL, skill levels, etc.)
Building a First Year Program at BCC

First Year Program Components:

- Theme based seminar integrating academic content and skill development
- Emphasis on student-centered pedagogies (including use of e-Portfolio)
- Embedded academic advisors and peer mentors
- Rigorous tracking and reporting of student progress for intervention/action
- Team approach to student success
How Does FYP fit BCC’s “big picture” goals?

- A focus on success (not only on access) and on outcomes (on what students learn, not only on what faculty teach).
- Focus on “disposition” -- for the first-year student and seminar instructor.
- FYP involves the entire college: faculty across disciplines, staff across offices and divisions. A team-based approach.
- FYP is transparent: open to investigation, experimentation, and assessment. We want to know what works. If it doesn’t work, we will change it.
First Year Seminar Curriculum

- Theme based
- Explicit learning objectives
  - Reasoning & analysis
  - Personal & professional development
  - Information literacy
- Emphasis on skills development, building community, and active learning
- Three areas
  - Introduction to academic competencies
  - College 101
  - Student development (personal growth)
- Challenges
  - Content acquisition vs. skills
  - The one-credit conundrum
  - Integration of areas
First Year Program – Pedagogy

First Year Program designed to positively impact student success in the first year and as an incubator for high impact practice across campus

- Site for experimentation and exploration of good pedagogical practices
- The “Incubator Effect” -- what works for the first-semester student will work for all BCC students
- Three concepts
  - “Intrusive Teaching”
  - Creating strong, student-centered learning environments
  - Embodied Pedagogies
First Year Program – Academic Advisement

- Case load: 350 students/advisor
- Three-point contact model
- Advisement is part of FYS grade
- Intrusive, collaborative, developmental
- Functions of advisors:
  - Assess risk
  - Major selection
  - Referrals to academic and personal support
  - Academic plans
  - Career planning
  - Outreach to students (at risk, disengaged, etc.)
  - Source of information (workshops)
First Year Program – Peer Mentors

- Embedded in FYS
- Current or graduated students
- +20 credits
- >3.2 GPA
- Completed developmental work
- 8 hrs/week
- Peer mentor training program
First Year Program - Role of Peer Mentors

- Model behavior and disposition
- Direct students to services on campus
- Provide guidance with technology
- Help create study groups/assist with course content
- Provide instructors feedback on student understanding of material
- Lead small group discussions in FYS
- Announce weekly co-curricular events
- Reach out to students
- Build community
- Mentors and Advisors
- Mentors and faculty
First Year Program – Assessment

- Centralized collection and reporting
- Early Progress Report
- Midterm Grade Report
- Surveys of Students, Faculty and Mentors
- Student Progress and Persistence Studies
- Group assessment (with rubrics) of student learning outcomes (reasoning & analysis) – sampling
Implementation and outcomes study
Approach

Two purposes

- Program refinement (implementation fidelity)
- Program assessment (outcomes and potential causes)

Mixed methods

- Propensity score matching
- Qualitative fieldwork

Multiple cohorts

- Transcript data for students entering BCC in fall 2012, spring 2013, fall 2013
- Qualitative data from 2013-2014 school year
Outcomes: Methods

Research question: Is FYS participation related to improved student outcomes?

Propensity score matching
- Students enroll in FYS unevenly

Transcript and demographic data for all students in target cohorts

FYS and non-FYS students have different characteristics, so create “matches” within the data for analytic purposes
- “one-to-one” matching

Final sample:
- 1,138 first-time freshmen not in FYS (comparison)
- 1,138 first-time freshmen in FYS (treatment)
- Samples similar on demographic and academic characteristics
## Outcomes: Findings

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Outcomes for FYS and Matched Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FYS</td>
</tr>
<tr>
<td>Average 1st semester all-course grade average (including developmental education courses)</td>
<td>2.36</td>
</tr>
<tr>
<td>Average 1st semester credit-course GPA (college-level courses only)</td>
<td>2.31</td>
</tr>
<tr>
<td>Average 1st semester credit accumulation</td>
<td>6.34</td>
</tr>
<tr>
<td>1st semester retention rate</td>
<td>81.7%</td>
</tr>
<tr>
<td>1-year retention rate</td>
<td>64.4%</td>
</tr>
<tr>
<td>GPA, end of fall 2014 semester (college-level courses only)</td>
<td>2.15</td>
</tr>
<tr>
<td>Credits earned, end of fall 2014 semester</td>
<td>21.97</td>
</tr>
</tbody>
</table>

*p < .10; **p < .05; ***p < .001

Karp et al., 2016
Program assessment: Methods

Research question: *To what extent does FYS encourage learning-for-application and future use of FYS-related skills?*

40 observations of 15 FYS course sections
   - Critical components approach
   - Structured observation rubrics

15 interviews with 10 FYS instructors
   - Semi-structured interview protocol

Fall and spring interviews with 19 FYS students
   - Semi-structured interview protocol
Program assessment: Findings

FYS encourages teaching-and-learning for application.

- FYS students are exposed to key skills and knowledge, including academic content.
- FYS students are provided with opportunity to practice and reflect.
- Applicants report using FYS skills and knowledge later on.

Karp et al., 2012
Conducting your own research
Implementation Fidelity

Is my program being delivered as intended?

- Explain null effects
- Identify areas for improvement
- Help instructors hone their practices

Diagram:
- Identification of the ideal
- Formative feedback
- Refinement of practice
- Data collection
A “critical components” approach
Century, Rudnick, & Freeman (2010)

1. Identify the critical components of your program
   • Interviews and document review
   • Theory of action or logic model
   • Do these critical components adhere to research and best practices?

2. Define what best, good, and poor look like for each component
   • Be specific and measurable
   • May need multiple descriptors for each component

3. Create a structured observation protocol
   • Provide a way to record what is happening during class time
   • Focus on details needed to assess best, good, and poor

4. Apply the rubric to your observations
   • Can look at implementation across course sections (Which instructors are adhering to the model?)
   • Can look at implementation across components (Which components are being implemented consistently well?)
BCC Observation Protocol

Sections for

- Class overview
- 5 key course components
- Student engagement

<table>
<thead>
<tr>
<th>Academic content</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education competencies addressed: (examples of general education competencies are: critical thinking, writing, speaking clearly and effectively, and reading)</td>
<td></td>
</tr>
</tbody>
</table>

| Orientation topics covered: (example of topics: financial aid, tutoring center information, student groups) |
| Student support skills addressed (example of student support skills include notetaking, academic planning) |
| Bloom’s taxonomy (example of skills: Interpreting and comparing different texts, analyzing a concept and applying it to academic plan) |
| Notes and description |
# BCC Implementation Rubric

6 categories; 3-point scale

## BCC FYS Fidelity of Implementation (FOI) Rubric

### Categories of Critical Components

<table>
<thead>
<tr>
<th>Component/Element</th>
<th>Low Implementation (1)</th>
<th>Medium Implementation (2)</th>
<th>High Implementation (3)</th>
</tr>
</thead>
</table>
| Student-centered pedagogy and use of collaborative learning activities | • Instructor mostly lectures and delivers instruction during the class session.  
• Students have limited opportunities to practice what they are learning through structured activities and real-world assignments.  
• Minimal class time is used for active learning activities (e.g., instructor does not incorporate student discussion into lesson; students are not provided opportunities for synthesizing or reflecting on what they have learned)  
• Students generally | • Instructor or peer mentor occasionally facilitate a discussion among students that allows for self-reflection and application to daily lives/experiences.  
• Students are provided with limited opportunities to critique their peers.  
• Class time is divided between lecture instruction and group activities or discussions.  
• Some of the structured activities allow students to engage in higher-order thinking tasks, such as analysis, synthesis, or evaluation.  
• Instructor and/or peer mentor facilitates group activities or discussions that allow students to | • Most class time is spent on students actively learning through structured activities or discussions (e.g., experiential learning activities; short written exercise; collaborative learning groups; student debates; reaction to a video; class game).  
• Students have opportunities to lead activities/discussions.  
• Students are given ample time to reflect on assignments/classwork.  
• Instructor frequently utilizes small work groups to implement activities in which students are engaged in solving problems collaboratively and/or for the provision of |
## Analysis of implementation fidelity

<table>
<thead>
<tr>
<th>Instructor code</th>
<th>Student-centered pedagogy and use of collaborative learning activities</th>
<th>E-portfolio</th>
<th>Peer Mentors/Winner's Circle</th>
<th>Intensive Advising</th>
<th>Student Engagement with FYS</th>
<th>Embedded General Education Proficiencies and Discipline-based Content</th>
<th>total score T3</th>
<th>score T1</th>
<th>Score T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2.333333</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2.166667</td>
<td>2.3</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2.166667</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2.333333</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1.833333</td>
<td>1.2</td>
<td>2.25</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1.5</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2.666667</td>
<td>2.2</td>
<td>2.5</td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.5</td>
<td>1.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Implementation Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.666666667</td>
<td>2.3333333333</td>
<td>2.2222222222</td>
</tr>
</tbody>
</table>
Using Evaluation Results to Inform Process Improvements
# Process Improvements in FYS Curriculum

<table>
<thead>
<tr>
<th>Evaluation Findings</th>
<th>Process Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Focus on content knowledge &amp; acquisition in FYS detracts from focus on learning for application</td>
<td>▪ Syllabus highlights general education learning outcomes</td>
</tr>
<tr>
<td></td>
<td>▪ Faculty development &amp; course assessment focus on learning for application</td>
</tr>
<tr>
<td>▪ Course topics (and course content) are best used as a vehicle to help students learn academic and personal skills</td>
<td>▪ Faculty development leaders review and critique new topics presented for FYS courses</td>
</tr>
<tr>
<td>▪ Students are more motivated if interested in the course topic</td>
<td>▪ Faculty encouraged to offer topics that are of generic interest to students</td>
</tr>
</tbody>
</table>
# Process Improvements in FYS Pedagogy

<table>
<thead>
<tr>
<th>Evaluation Findings</th>
<th>Process Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Variation in faculty use of student-centered pedagogy in FYS.</td>
<td>▪ Faculty training for FYS redesigned to better model active learning approaches.</td>
</tr>
<tr>
<td>▪ Student academic performance in first semester and beyond related to faculty use of student-centered pedagogy</td>
<td>▪ Faculty trained/expected to include a critical thinking performance task (which requires active learning and can be assessed by common rubric) as major assignment in class.</td>
</tr>
</tbody>
</table>
# FYS Classroom Observation (and Rubric) Supports Improvement

<table>
<thead>
<tr>
<th>Review Section</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Teaching Methods</strong></td>
<td>active learning strategies; group work; reflection, e-portfolio</td>
<td></td>
</tr>
<tr>
<td><strong>2. Rapport</strong></td>
<td>provides feedback; interacts with students; enthusiastic</td>
<td></td>
</tr>
<tr>
<td><strong>3. Assistance to Students</strong></td>
<td>peer mentors – play active role; advisement required</td>
<td></td>
</tr>
<tr>
<td><strong>4. Student Engagement</strong></td>
<td>personal experiences to relate to course material</td>
<td></td>
</tr>
<tr>
<td><strong>5. Other</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>