Scaling Up a Student Support Network

Margot Edlin
Associate Professor and Faculty Fellow

Elisabeth Lackner
Director of Institutional Research and Assessment

Hamadi Henderson
Research Analyst

Paul Marchese
Physics Department Chair
# Research Problem

The table below provides the three-year retention and graduation rates for first-time full-time freshmen at Queensborough Community College (QCC) and other CUNY institutions. The data covers the fall cohorts from 2001 to 2008.

<table>
<thead>
<tr>
<th>Fall Cohort</th>
<th>Total</th>
<th>Earned Degree Pursued at QCC**</th>
<th>Still Enrolled QCC</th>
<th>Still Enrolled Other CUNY</th>
<th>Not Enrolled at CUNY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1731</td>
<td>13.9%</td>
<td>20.7%</td>
<td>9.7%</td>
<td>55.3%</td>
</tr>
<tr>
<td>2002</td>
<td>1742</td>
<td>14.4%</td>
<td>20.2%</td>
<td>9.2%</td>
<td>56.0%</td>
</tr>
<tr>
<td>2003</td>
<td>1818</td>
<td>15.3%</td>
<td>20.9%</td>
<td>8.2%</td>
<td>55.4%</td>
</tr>
<tr>
<td>2004</td>
<td>1808</td>
<td>13.1%</td>
<td>21.5%</td>
<td>9.8%</td>
<td>55.4%</td>
</tr>
<tr>
<td>2005</td>
<td>1910</td>
<td>13.1%</td>
<td>22.7%</td>
<td>9.7%</td>
<td>54.3%</td>
</tr>
<tr>
<td>2006</td>
<td>2051</td>
<td>13.0%</td>
<td>21.4%</td>
<td>10.4%</td>
<td>55.2%</td>
</tr>
<tr>
<td>2007</td>
<td>2188</td>
<td>16.0%</td>
<td>21.6%</td>
<td>9.9%</td>
<td>52.4%</td>
</tr>
<tr>
<td>2008</td>
<td>2383</td>
<td>13.9%</td>
<td>23.3%</td>
<td>10.0%</td>
<td>52.5%</td>
</tr>
</tbody>
</table>

* A fraction of the population is in non-degree CUNY courses. Percentage not reported.

*Degree awarded at QCC or another CUNY college
Project Evolution

- Academies – Early Alert – single system

- Original Early Alert system – IBM grant – fall 2010 – system piloted in spring 2011

- Scaled up through Spring 2013 - 37% of faculty participation

- CUNY SSRP (Student Success Research Project) grant – assessment of effectiveness of system (spring 2013)

- Gates Foundation grant – disseminate information to faculty and staff (spring 2013).

- Starfish Early Alert with referrals to learning centers launched Fall 2013, 50% faculty participating by mid-November
Starfish Early Alert aims and methods

• Why?
  • Support of revamped and expanded Academy model
  • Single technology with extensive functionality

• How?
  • Clearer communication of student issues
  • Flags to Advisers, Referrals to Learning Centers
  • Documented follow-up
  • Measurable outcomes for assessment of system and implementation effectiveness
Functionality of Early Alert System

1. Flags, Kudos, Referrals

2. Academic Progress Surveys to Faculty

3. Faculty complete Academic Progress Surveys

4. Faculty can raise individual concerns

5. Advisors and student support personnel review flags and referrals and take action

6. The process is documented and faculty are notified

7. The system allows for reports on all activities
# Starfish Flags for the Fall 2013 Semester

<table>
<thead>
<tr>
<th>Flag Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateness Concern</td>
<td>Raise this when a student is coming late to class regularly</td>
</tr>
<tr>
<td>Attendance Concern</td>
<td>Raise this when a student isn't attending class regularly</td>
</tr>
<tr>
<td>Unprepared for Class (Homework, Class materials)</td>
<td>Raise this when a student is not prepared for class such as missing homework or projects, textbooks or handouts</td>
</tr>
<tr>
<td>Poor Class Performance</td>
<td>Raise this when a student receives a poor grade on a quiz or test, does not participate in class and/or misses assignments</td>
</tr>
<tr>
<td>In Danger of Failing</td>
<td>Raise this when a student is in danger of failing a course</td>
</tr>
</tbody>
</table>
# Starfish Kudos for the Fall 2013 Semester

<table>
<thead>
<tr>
<th>Kudo Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep Up the Good Work</td>
<td>Raise this kudo for students who are performing well</td>
</tr>
<tr>
<td>Outstanding Academic Performance</td>
<td>Raise this kudo when a student has outstanding academic performance</td>
</tr>
<tr>
<td>Showing Improvement</td>
<td>Raise this kudo when a student has shown improvement</td>
</tr>
</tbody>
</table>
## Starfish Referrals for the Fall 2013 Semester

<table>
<thead>
<tr>
<th>Referral Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Literacy Center</strong></td>
<td>Tutoring assistance for all BE courses, and for students who wish to improve reading comprehension, and ability to write clearly</td>
</tr>
<tr>
<td><strong>Campus Writing Center</strong></td>
<td>Tutoring assistance for all English (EN) coursework, as well as any writing-related or WI assignment across the curriculum</td>
</tr>
<tr>
<td><strong>Math Learning Center</strong></td>
<td>A tutoring and self-study facility which provides assistance for all mathematics and computer science courses</td>
</tr>
<tr>
<td><strong>Student Learning Center</strong></td>
<td>The SLC offers free academic tutoring services for Art History, Biology, Business, Chemistry, Education, Foreign Languages, Geology, Health Sciences, History, Nursing, Physics and the Social Sciences</td>
</tr>
</tbody>
</table>
Academic Progress Surveys to faculty

Email notification sent to instructors, includes survey instructions, and a listing of the semester’s course load

[Starfish] Progress Survey for 9/10/2013

Sent: Tuesday, September 10, 2013 9:05 PM
To: Starfish

Dear Lucian Makalanda,

As you know, we are utilizing Starfish to help us make the process of reporting on the academic progress of our students as easy and efficient as possible. Through a Progress Survey you will have a quick way to inform us of your students’ progress in class.

To access the Progress Survey for your course(s):

1. Login to Starfish.
2. A link to your Outstanding Surveys will be displayed at the top of your Starfish homepage.
3. Once you reach the survey grid, simply check the box next to the particular student’s name for whom you would like to report progress. You will have options to add comments.
4. Click Submit. If you don’t have any progress to report, it is important that you click Submit, so we know you reviewed the survey. You will receive a confirmation email.
5. Items you raise will be addressed by the appropriate individuals from our institution.

You have 5 surveys which need to be completed.

Outstanding Surveys:

1. Copy of Survey Test 2 - STATISTICS - 9/10/2013
2. Copy of Survey Test 2 - STATISTICS - 9/10/2013
3. Copy of Survey Test 2 - ANL GEOM & CALC I - 9/10/2013
4. Copy of Survey Test 2 - ELEM ALGEBRA - 9/10/2013
5. Copy of Survey Test 2 - COLLEGE ALGEBRA - 9/10/2013

View Surveys in Starfish!

Your responses will help us know which students to reach out to and offer help.
Faculty complete Academic Progress Surveys
Faculty can raise individual concerns
Faculty can raise individual concerns
Advisors and student support personnel review flags and take action

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Item Name</th>
<th>Status</th>
<th>Created By</th>
<th>Creation Date</th>
<th>Due Date</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruiz, Thaisa</td>
<td>Math Learning Cen...</td>
<td>Resolved</td>
<td>Khomyak, Natali via...</td>
<td>11-27-2013</td>
<td></td>
<td>MATH IN COMT SOCIETY (MA.321.K24.FA13)</td>
</tr>
<tr>
<td>Nael, Ada</td>
<td>Math Learning Cen...</td>
<td>Resolved</td>
<td>Cifone, Danielle via Su...</td>
<td>11-27-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.ASP4.FA13)</td>
</tr>
<tr>
<td>Copper, Patrick</td>
<td>Math Learning Cen...</td>
<td>Resolved</td>
<td>Holt, Robert via Survey</td>
<td>11-29-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.H0.FA13)</td>
</tr>
<tr>
<td>Collums, Marlene</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Kim, Kwang Hyun via ...</td>
<td>09-16-2013</td>
<td></td>
<td>PRE CALCULUS MATH (MA.440.E13A.FA13)</td>
</tr>
<tr>
<td>Watters, Steven</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Kim, Kwang Hyun via ...</td>
<td>09-16-2013</td>
<td></td>
<td>PRE CALCULUS MATH (MA.440.E13A.FA13)</td>
</tr>
<tr>
<td>Fagan, Timothy</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Makalanda, Lucian via ...</td>
<td>09-16-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.J24A.FA13)</td>
</tr>
<tr>
<td>Labrous, Danyell</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Makalanda, Lucian via ...</td>
<td>09-16-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.J24A.FA13)</td>
</tr>
<tr>
<td>Paul, Elizabeth</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Makalanda, Lucian via ...</td>
<td>09-16-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.J24A.FA13)</td>
</tr>
<tr>
<td>Valthos, Bruce</td>
<td>Math Learning Cen...</td>
<td>Active</td>
<td>Makalanda, Lucian via ...</td>
<td>09-16-2013</td>
<td></td>
<td>COLLEGE ALGEBRA (MA.119.J24A.FA13)</td>
</tr>
</tbody>
</table>
Advisors and student support personnel review flags and take action.
Advisors and student support personnel review flags and take action.
The process is documented
Faculty are notified
Statistics on Participation
(Fall 2012, Spring 2013, Fall 2013)

<table>
<thead>
<tr>
<th></th>
<th>Fall 2012</th>
<th>Fall 2012</th>
<th>Spring 2013</th>
<th>Spring 2013</th>
<th>Fall 2013</th>
<th>Fall 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>Percentage</td>
<td>Count</td>
<td>Percentage</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>Participating faculty*</td>
<td>362</td>
<td>37%</td>
<td>347</td>
<td>37%</td>
<td>468</td>
<td>49%</td>
</tr>
<tr>
<td>Total unique students with a tracking item**</td>
<td>5019</td>
<td>36%</td>
<td>5209</td>
<td>39%</td>
<td>8,708</td>
<td>53%</td>
</tr>
</tbody>
</table>

*Participating faculty percentages refer to percentage of faculty teaching non-lab courses
**Total unique students with tracking item percentages refer to percentage of entire degree student population for that semester
## Tracking Student Success

<table>
<thead>
<tr>
<th>Flagged</th>
<th>Tutoring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
<td><strong>Yes</strong></td>
<td><strong>No</strong></td>
</tr>
<tr>
<td>Student was not flagged and had tutoring</td>
<td>Student was not flagged and had no tutoring</td>
<td></td>
</tr>
<tr>
<td><strong>Yes</strong></td>
<td><strong>Flagged</strong> and had tutoring</td>
<td><strong>Flagged</strong> and had no tutoring</td>
</tr>
</tbody>
</table>
Outcome Measures

• Course Completion Rates
• Course Pass Rates for Developmental Courses
• Rates of C or higher for Credit Bearing Courses
• Unofficial Withdrawal Rates
Course Completion Rates

Developmental courses reading, writing and math – completion rate (Fall 2012, Spring 2013, Fall 2013)

- Student was flagged -- had tutoring: 73%
- Student was flagged -- had no tutoring: 46%
- Student was not flagged -- had tutoring: 90%
- Student was not flagged -- had no tutoring: 75%
Course Completion Rate
Credit bearing courses completion rates (Fall 2012, Spring 2013, Fall 2013)

<table>
<thead>
<tr>
<th></th>
<th>Percent of Students Completing the Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student was flagged -- had tutoring</td>
<td>74%</td>
</tr>
<tr>
<td>Student was flagged -- had no tutoring</td>
<td>55%</td>
</tr>
<tr>
<td>Student was not flagged -- had tutoring</td>
<td>91%</td>
</tr>
<tr>
<td>Student was not flagged -- had no tutoring</td>
<td>83%</td>
</tr>
</tbody>
</table>

Student was flagged -- had no tutoring -- had no tutoring

Student was not flagged -- had tutoring -- had tutoring
Percent Passing
Developmental course reading, writing and math – percent passing (Fall 2012, Spring 2013, Fall 2013)

- **Student was flagged -- had tutoring**: 25%
- **Student was flagged -- had no tutoring**: 11%
- **Student was not flagged -- had tutoring**: 52%
- **Student was not flagged -- had no tutoring**: 41%
Course Grades C or Better
Credit bearing courses percent with C or better
(Fall 2012, Spring 2013, Fall 2013)

- Percent of Students With a Grade of C or Better
  - Student was flagged -- had tutoring: 34%
  - Student was flagged -- had no tutoring: 7%

- Percent of Students With a Grade of C or Better
  - Student was not flagged -- had tutoring: 73%
  - Student was not flagged -- had no tutoring: 69%
Decrease of Unofficial Withdrawal

Developmental course reading, writing and math – unofficial withdrawal rate

(Fall 2012, Spring 2013, Fall 2013)

- Percent of Students with an Unofficial Withdrawal Grade (WU)
  - Student was flagged -- had no tutoring: 29%
  - Student was flagged -- had tutoring: 14%
  - Student was not flagged -- had no tutoring: 12%
  - Student was not flagged -- had tutoring: 7%
Decrease of Unofficial Withdrawal
Credit bearing courses – withdrawal rates
(Fall 2012, Spring 2013, Fall 2013)

percent of students with an unofficial withdrawal grade (WU)

- Student was flagged -- had no tutoring: 15%
- Student was flagged -- had tutoring: 7%
- Student was not flagged -- had no tutoring: 5%
- Student was not flagged -- had tutoring: 2%
College Wide Trend in Course Withdrawals

Developmental Courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Percent of Official Withdrawals</th>
<th>Percent of Unofficial Withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall '10</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>Spring '11</td>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td>Fall '11</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Spring '12</td>
<td>7%</td>
<td>14%</td>
</tr>
<tr>
<td>Fall '12</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Spring '13</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Fall '13</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>
College Wide Trend in Course Withdrawals

Credit Bearing Courses

- Fall '10: 11%
- Spring '11: 9%
- Fall '11: 10%
- Spring '12: 11%
- Fall '12: 11%
- Spring '13: 10%
- Fall '13: 14%

- Percent of Official Withdrawals
- Percent of Unofficial Withdrawals

Fall '10: 6%
Spring '11: 7%
Fall '11: 7%
Spring '12: 6%
Fall '12: 6%
Spring '13: 7%
Fall '13: 6%
Student Survey - Sample
(Spring 2013)

- 927 students flagged by the Early Alert system completed the survey
- Response rate 18%, Margin of error 2.92%
- More female, full-time and Asian students participated in the survey
Student Survey – After contact
(Spring 2013)

- The majority students were happy to have been contacted by an advisor
- The most frequent action take was to set an appointment for in-person meeting

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was glad to speak to someone other than my professor about my situation</td>
<td>34%</td>
<td>38%</td>
<td>17%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>I appreciated that there was someone &quot;Watching Out&quot; for me</td>
<td>37%</td>
<td>35%</td>
<td>15%</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>I was grateful that somebody contacted me about my academic standing.</td>
<td>30%</td>
<td>37%</td>
<td>14%</td>
<td>6%</td>
<td>13%</td>
</tr>
</tbody>
</table>
Student Survey – Difficult subjects
(Spring 2013)

- Student responses reflect the system finding that the courses causing students the most difficulty are Mathematics and English.
Which of the following obstacles impeded your academic performance this year?

Social/Family issues were obstacles in spring 2013

- All Survey respondents: 41%
- Women*: 45%
- Hispanic students**: 51%

* p-value < 0.05
** p-value < 0.01
Discussion

- Student Survey: student experience of the early alert system is positive. Successfully contacting more flagged students needs to be addressed.
Faculty Participation

- Majority of faculty learned to use the system through trial and error.
  - “So easy even a caveman could do it”

![Pie chart showing the percentage of faculty learning through different methods:]

- 70%Self-taught (i.e., trial and error)
- 13%Attended scheduled training session
- 9%Worked independently with training materials (webinars, online manuals, etc)
- 8%Other (please specify)
Faculty Participation

- The usage of the Early Alert system was not concentrated among courses with more under-prepared students

![Pie chart showing faculty participation]

- About a quarter of my students (28%)
- About half of my students (11%)
- More than half of my students (5%)
- Almost all of my students (6%)
- Very few students (20%)
- About 10 percent of my students (30%)
Faculty Participation

All Responses, N = 277

- Refer students to academic tutoring centers: 58%
- Notify students directly of academic standing: 56%
- Alert academic advisors/counselors about students: 54%
- Kudos: 40%
- Refer students to advisement/counseling: 34%
- Enter comments to advisors/counselors: 33%
- Clear raised flag when student addresses concern: 14%
- Email students directly from Starfish: 8%
Faculty Participation

N = 277

- **Refer students to academic tutoring centers**
  - Total: 58%
  - Academic Literacy: 68%
  - Business: 67%
  - Health Related Sciences: 68%
  - Liberal Arts: 46%
  - STEM: 67%
  - Visual and Performing Arts: 24%

- **Enter comments to advisors and counselors**
  - Total: 32%
  - Academic Literacy: 61%
  - Business: 19%
  - Health Related Sciences: 19%
  - Liberal Arts: 30%
  - STEM: 31%
  - Visual and Performing Arts: 41%
Faculty Participation

“I would continue to use Starfish Early Alert in the future.”

- All respondents (N=282): 83% Strongly Agree or Agree
- Noticed a change in students’ performance (N=110): 99%
- Believed QCC offers sufficient resources (N=207): 90%
- Informed of the outcomes of raised flags (N=174): 88%
Faculty Participation

• Faculty Focus Group
  – Faculty had very positive appraisals of the system
    • “It’s not babying students, its informing them.”
  – They also noticed some changes in student behavior as a result of using the system
    • “I’m going to STARFISH you!”
  – Faculty had lingering misconceptions of how to use the system
Future Work

• Longitudinal study for all semesters from onset of system through Spring 2014

• Continue to assess student outcomes for each semester

• Expand system to include additional support services

• Continue to promote increased faculty participation