

IMPROVING RETENTION BY MENTORING AND TUTORING FRESHMEN STUDENTS

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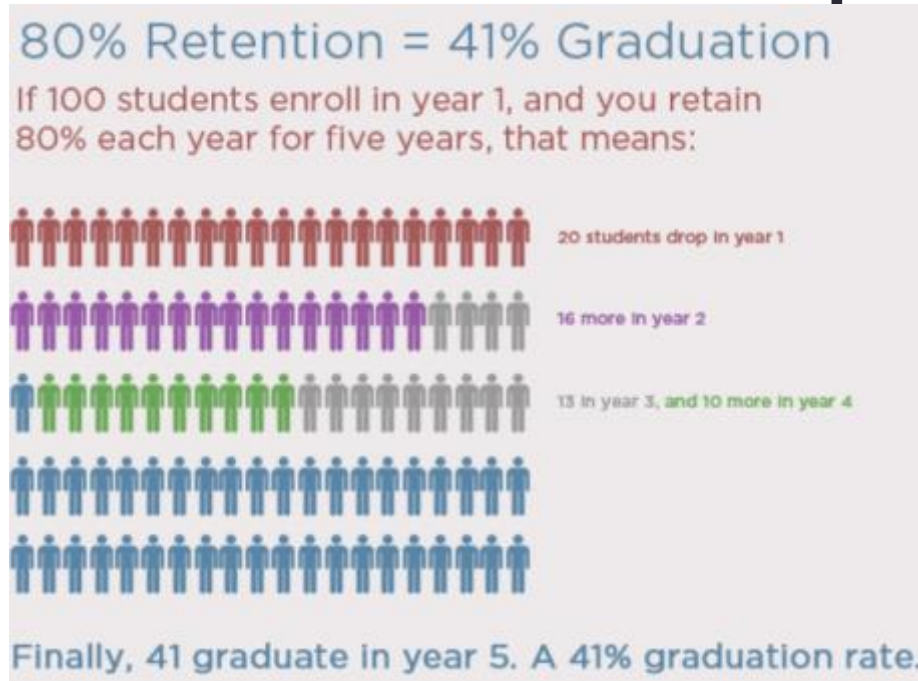


Outline

- Motivation
- Related work on Retention
- Our Mentoring & Tutoring program
- Assessment
- Conclusion

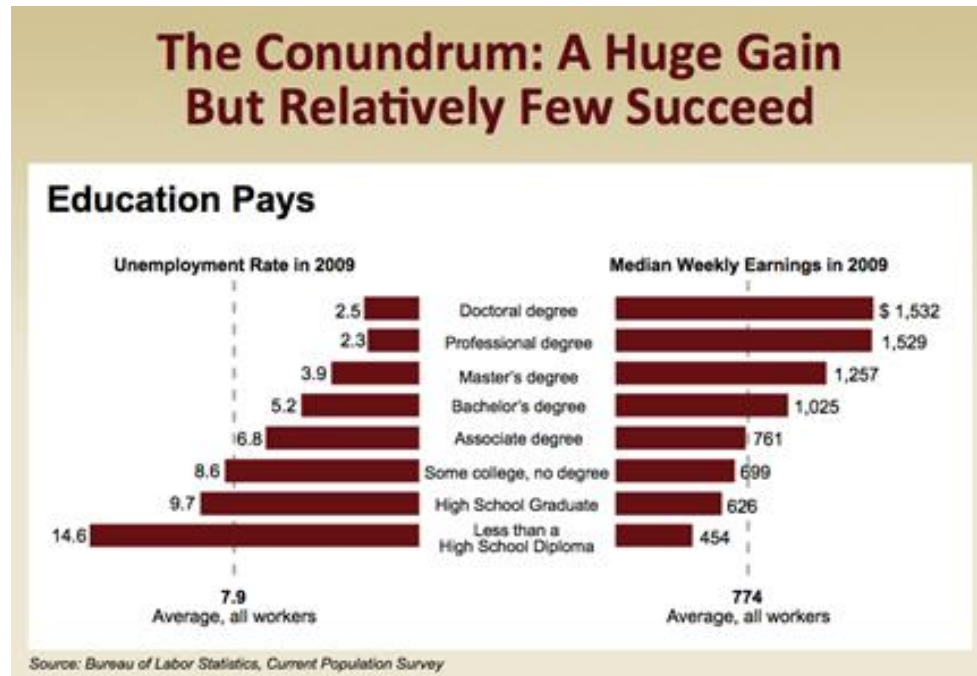


Why retention is so important?



Retention: A key concern!

- A college degree are critical for students due to the employment associated with levels of education.



- At public four year institutions, only 52.4% of students graduate within four years where they began as First-Time-in-College (FTIC) students.

Source: Chronicle of Higher Education

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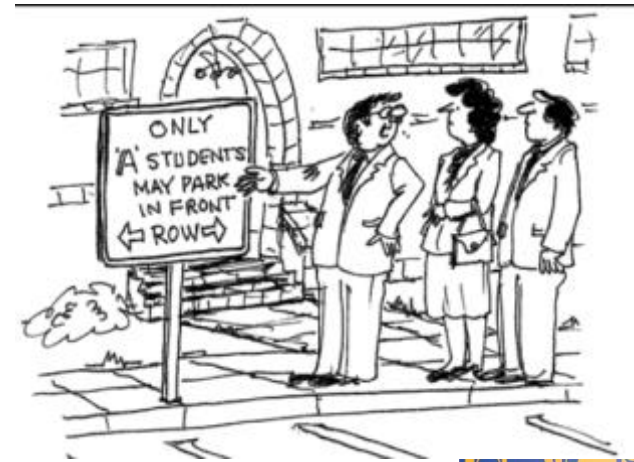
Retention and the U.S. Gov't

- President Obama's 2009, 2010 and 2011 State of the Union addresses have all touched on college completion, most notably in 2009 when he said:
- *“This country needs and values the talents of every American. That is why we will provide the support necessary for you to complete college and meet a new goal: by 2020, America will once again have the highest proportion of college graduates in the world”*



Obstacles for improving Retention

- Financial barriers
- Student incentives
- Academic preparation aid
- Information to make decisions



Our Approach:



1. Mentoring
2. Tutoring
3. Guest Speakers

Senior Students ->
Freshmen Students

From the
industry



Need for Mentoring

- Goals:
 - Help students prioritize their studies.
 - Plan their four year journey at the institution.
 - Identify and overcome barriers to academic success.
- Assessing student's life outside of school:
 - Personal time commitments (work scheduling)
 - Primary care giving
 - Financial advices



Need for Tutoring



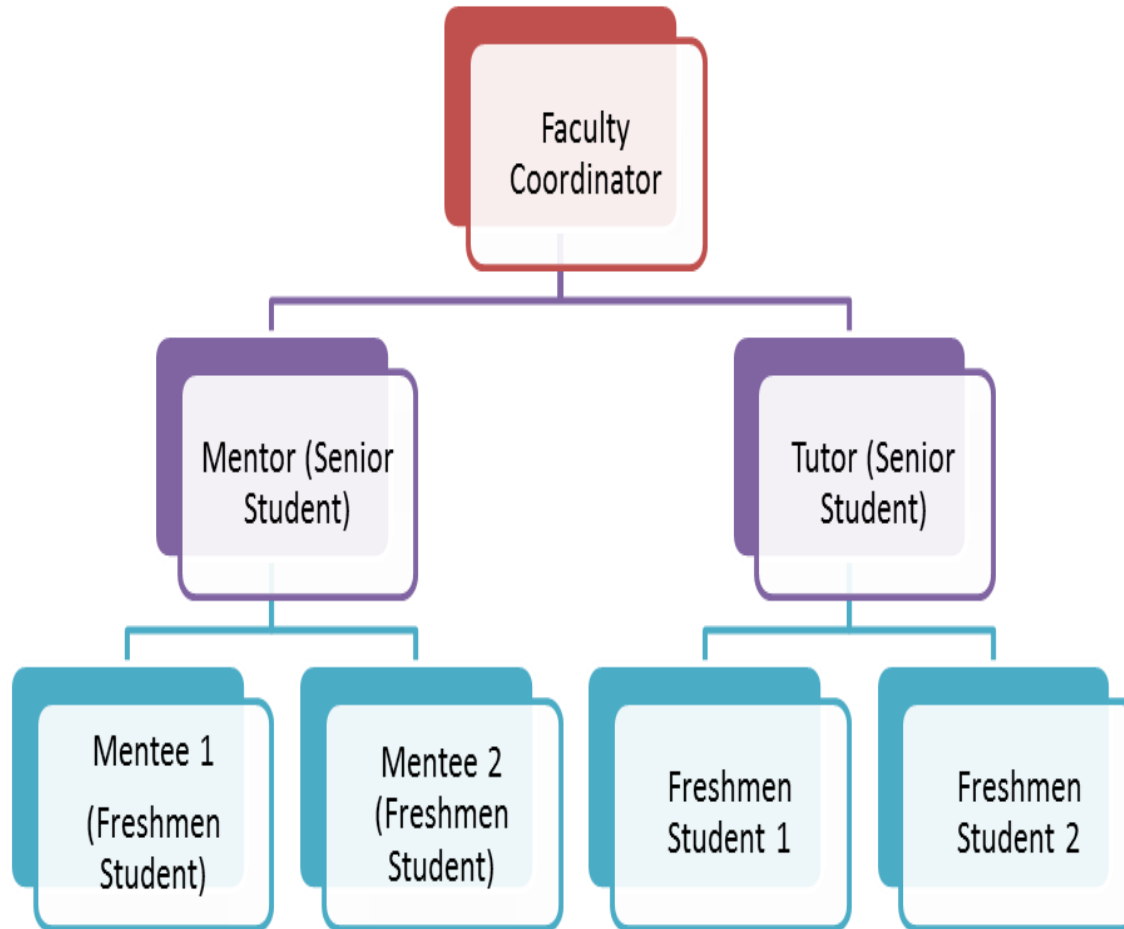
- Goals:
 - Help adapt to the college learning culture.
 - Ramp up freshmen who have lack of exposure to academic rigor.
 - Act as role models who can guide them through the academic rigor.
- Roles:
 - Specialized in different areas (Networking, Database, Programming, etc)
 - Hold office hours
 - Answer specific questions about Homework, Exams, etc.

Guest Speaker:



- An opportunity for the freshmen students to hear, firsthand, about a particular occupation, the necessary preparation, required knowledge, and other interesting information from a current practitioner in that field.
- The visit typically lasts from 30-90 minutes.
- Students often have unrealistic expectations about careers and workplace requirements and need the insight that a business person can provide.
- Company video tapes are also excellent tools to use for demoing the real world to the students.

Hierarchy of Mentoring Model



Date	Activity
August	Audit students' schedule. Select Students Select Mentors Select Tutors
September	Hire and Train Student Mentors/Mentee Develop meeting schedules with mentor/mentee Hire Tutors/Develop Schedule Meet with the selected students, mentors, tutors as a group. Tutoring and mentoring begins.
October	Continue weekly meetings with mentees Meet with Mentors/Tutors Invite guest speaker from IT industry
November	Continue Weekly Meetings with mentee Meet with Mentors/Tutors Check students' mid-semester grades
December	Continue weekly meetings with mentees Invite guest speaker from It industry Wrap up meeting with students, tutors, mentors.

Timeline for Fall 2013 Semester at NYCCT.

Tutoring Schedule (Spring 2014)

Location: CST Lab (N-928)

	Monday	Tuesday	Wednesday
10:00 - 10:50	Database, Java, Networking	Database, Java, VB	Database, Java, Networking
11:00 - 11:50	Database, Java, Networking	Database, Java, VB	Database, Java, Networking
12:00 - 12:50	Database, Java, Networking	Database, Java, Networking, VB	Database, Java, Networking
1:00 - 1:50	Database, Java, Networking*	Database, Java, Networking, VB	Database, Java, Networking*
2:00 - 2:50	Database, Java, Web*	Database, Java, Web	Database, Java, Web*
3:00 - 3:50	Database, Java, Web*	Database, Java, Web	Database, Java, Web*
4:00 - 4:50	Database, Java, VB, Web	Database, Java, Web*	Database, Java, VB, Web
5:00 - 5:50	Database, Java, VB, Web	Database, Java, Web*	Database, Java, VB, Web

	Thursday	Friday	Saturday
10:00 - 10:50	Database, Java, Networking, VB	Database, Java, VB	
11:00 - 11:50	Database, Java, Networking, VB	Database, Java, Networking, VB	
12:00 - 12:50	Database, Java, Networking, VB	Database, Java, Networking	Database, Java, Web
1:00 - 1:50	Database, Java, Networking, VB	Database, Java, Networking	Database, Java, Web
2:00 - 2:50	Database, Java, Web	(Until 3:30)	Database, Java, Web
3:00 - 3:50	Database, Java, Web	Database, Java, Networking, VB	Database, Java, Web
4:00 - 4:50	Database, Java, VB, Web		Database, Java, Web
5:00 - 5:50	Database, Java, VB, Web		

Student Name	Total Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Kaji Lama	19	10:00 - 2:00	12:00-2:00	10:00 - 2:00	10:00 - 2:00	10:30-3:30	...
Komoliddin Fazliddin	16	2:00 - 6:00	2:00 - 6:00	2:00 - 6:00	2:00 - 6:00
Aqsa Malik	13.5	...	10:00 - 1:30	...	10:00 - 2:00, 4:00 - 6:00	10:00-12:00, 1:30 - 3:30	...
Olufemi Akinbode	9	...	1:30 - 4:00	...	2:30 - 4:00	...	12:00 - 5:00
Christopher Roberts	8	1:00 - 4:00	4:00 - 6:00	1:00 - 4:00
Jason Rosado	4	4:00 - 6:00	...	4:00 - 6:00



Tutor with Freshmen Student



Mentor with Mentee



Tutor with Student





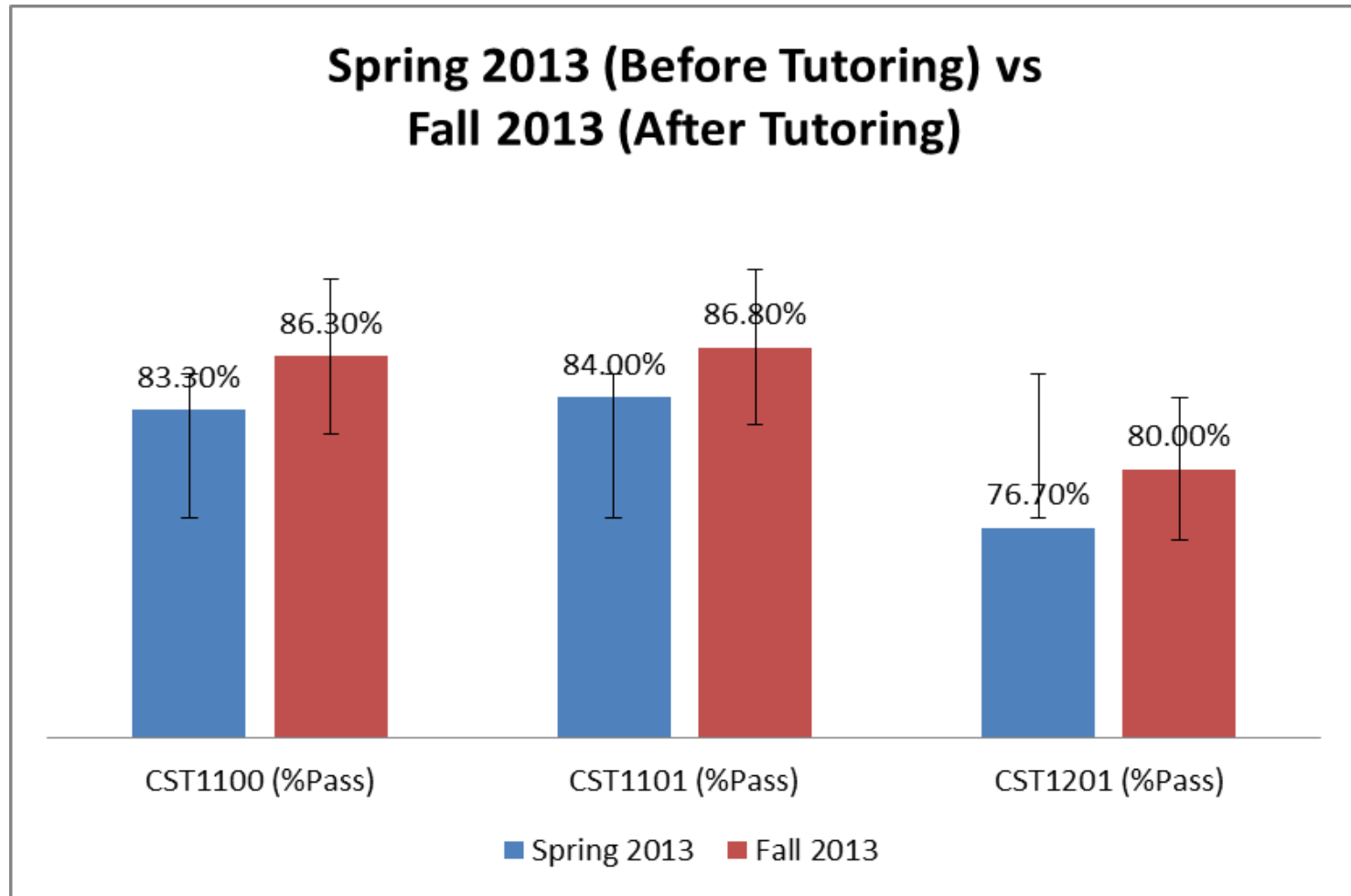
Assessment: Does Mentoring program really work?



Grades Before and After Tutoring

Spring 2013:			
Course Code	%Pass (D or better)	%Pass (C or Better)	% Fail
CST1100	83.30%	77.60%	3.60%
CST1101	84.00%	81.40%	4.10%
CST1201	76.70%	72.00%	10.10%
Fall 2013:			
Course Code	%Pass (D or better)	%Pass (C or Better)	% Fail
CST1100	86.30%	82.60%	4.70%
CST1101	86.80%	83.00%	3.30%
CST1201	80.00%	69.80%	6.50%

Pass % Before vs After Tutoring



Conclusion

- In this paper we present a cost-effective approach which increases college retention rates at any four year public community college.
- We showed that mentoring and tutoring helped freshmen students get about 3-5 percentage points higher grades. The results were shown to be statistically significant using Chi-Square statistical analysis.
- This would mean that they are more likely to persist in college. This represents a 9 to 12 percent increase in retention rate.

Acknowledgments

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- We want to thank our senior student **Jason Rosado**, the president for the computer club, for his help in preparing schedules, coordinating meetings and also in advertising this new model to several freshmen across the campus.

Questions?



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