

Th'Ink Well

Quarterly Newsletter from the Center for Teaching Excellence

Inside this issue:

- Retention Rates & Graduation Rates in NJ **1**

- Factors Students Consider when Enrolling in College **2**

- Why Students Leave WPU * *Mini Survey* **3**

- A Non-Retention Story from WPU **3**

- Dealing with Student Expectations **4**
Dr. J. Champanerkar

Retention Rates and Graduation Rates in New Jersey

The *Star-Ledger's* January 30, 2011 report by Kelly Heyboer brought to light disturbing news about college retention and graduation rates in the State of New Jersey. Analysis of graduation data from more than two dozen campuses suggests that freshmen have less than a 50 percent chance of graduating from college in four years. The most recent figures published by the federal Department of Education (2008), indicate there is a wide range of variation in 4-year graduation rates among NJ colleges, ranging from 90% percent at Princeton University to 6% at the New Jersey City University. At Kean, Montclair State and William Paterson University, some of the largest public universities in New Jersey, less than a third of their full-time freshmen completed bachelors' degrees within four years. WPUNJ ranked well-below others.

There are many reasons why retention and graduation rates might be low in NJ campuses, says the *Star-Ledger* report. Students may delay degrees due to class-scheduling difficulties, overcrowded courses, the pressure of part-time jobs, or financial problems. Students may also drop out, transfer to other schools, or enroll part-time and deliberately take fewer classes during the semester. Others may declare their majors late, change majors, take remedial classes, or find that they can't get the courses they need to graduate on time.

GRADUATION RATES AT NEW JERSEY COLLEGES

The federal Department of Education requires colleges and universities to submit data on how many of their freshmen graduate in either four or six years. The numbers include only full-time students who had never previously been to college. A *Star-Ledger* analysis of the numbers shows the chances of graduating in four years are slim at many of the state's public and private schools. The colleges say the numbers are low for several reasons, including students dropping out, transferring to other colleges, switching majors or working and delaying their graduation.

Percentage of freshmen who graduate within four or six years

	2004		2008	
	WITHIN FOUR YEARS	WITHIN SIX YEARS	WITHIN FOUR YEARS	WITHIN SIX YEARS
Princeton University	86	97	90	96
Drew University	67	73	71	77
The College of New Jersey	63	81	68	85
Ramapo College	36	62	53	70
Rutgers University-New Brunswick	46	71	49	75
College of Saint Elizabeth	53	61	49	59
Rider University	48	61	46	58
Georgian Court University	33	63	46	64
Seton Hall University	40	57	45	61
Stevens Institute of Technology	30	75	44	79
Centenary College	23	32	44	47
Rowan University	37	63	43	65
Richard Stockton College of New Jersey	43	64	43	65
Fairleigh Dickinson U.-Florham Campus	32	52	38	55
Monmouth University	30	55	37	59
Caldwell College	50	58	33	46
Saint Peter's College	38	46	33	48
Rutgers University-Camden	22	54	29	58
Montclair State University	23	57	28	62
Rutgers University-Newark	25	54	26	59
Felician College	13	36	22	35
Fairleigh Dickinson U.-Metro Campus	26	39	21	39
Bloomfield College	10	28	17	36
New Jersey Institute of Technology	17	53	16	55
Kean University	14	45	16	44
William Paterson University	13	48	16	45
New Jersey City University	7	37	6	34

Source: Data reported by colleges to U.S. Department of Education/Integrated Postsecondary Education Data System (IPEDS)
THE STAR-LEDGER

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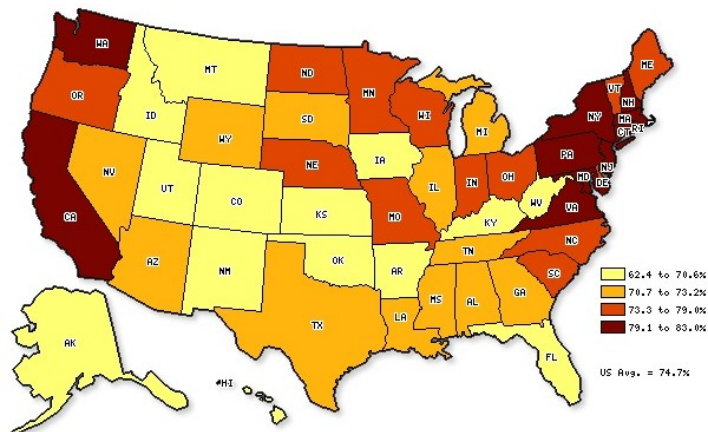
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Retention and Graduation Rates in New Jersey

(continued from *Star-Ledger*)

American colleges are feeling the pressure to improve retention and graduation rates. President Obama set the goal of having the U.S. lead the world in the number of college graduates by 2020. College administrators, however, argue these plans add unfair pressures. No one knows exactly how much the economic recession has affected college graduation rates. Graduation should be seen as the student's responsibility, not the administrators'. Furthermore, 4-year and 6-year graduation rates only track first-year, full-time undergraduates who finish their degrees on the campus they joined as freshmen. Many students enroll part-time, transfer from other colleges after their freshman year, or are older and non-traditional. All these categories are excluded from 4-year and 6-year graduation rate statistics.

New Jersey colleges are using different strategies to improve their graduation rates. At Kean, students are being offered more night and weekend classes. At Georgian Court, campus officials are encouraging students to join clubs because involved students are less likely to drop out. At Ramapo College, students are given a clear plan that shows how to schedule their classes to graduate on time. Many slightly improved their 4-year graduation rates between 2004 and 2008.



Source: NCES, IPEDS Enrollment Survey

First-Time College Freshmen Returning their 2nd year (2008)

Source: NCHEMS Information Center at

<http://www.higheredinfo.org/analyses/newmeasures.php>

Source: See *Star-Ledger* Report at http://www.nj.com/news/index.ssf/2011/01/few_freshmen_at_nj_colleges_gr.html

Factors Students Consider when Choosing a College

Eric Hoover, from *The Chronicle of Higher Education*, reported on two recent surveys on college applicants and their parents and their views on the process. Maguire Associates, an education-consulting firm, and Fastweb surveyed 21,000 high school seniors and found:

- ◆ Nearly 70 percent stated the economy had “greatly” or “somewhat” shaped their decisions on where to apply.
- ◆ 67 percent said job opportunities after graduation were “extremely important”, while the other responses were quality of major (66 percent) and availability of financial aid (63 percent).
- ◆ Only 14 percent said the diversity of students was extremely important, and 20 percent said the same about social life.

The Princeton Review conducted its annual “College Hopes and Worries Survey” which found that the economy has affected the choices of 72 percent of about 12,000 college applicants and their parents. The biggest worry (37 percent) was that students will get into their first-choice college but won't have sufficient funds/financial aid to attend.

When asked to name the statistic respondents consider most important when researching a college:

- ◆ 38 percent cited the average SAT score of admitted freshman
- ◆ 24 percent chose the percentage of applicants admitted
- ◆ 21 percent chose percent of students receiving financial aid
- ◆ 17 percent picked “graduation rate”

This particular survey illustrates that students do not consider retention or graduation rates to be most important .

Source: *The Chronicle of Higher Education*, March 24, 2011

<http://chronicle.com/blogs/headcount/%E2%80%99tis-the-season-for-hopes-worries-dreams-fears-etc/28034>

Why Students Leave WPU * *Mini Survey on Campus*

Fifty students were asked about classmates they knew who had transferred out of WPU. Most had at least two acquaintances leaving college. 34% of the student respondents had considered leaving our college community themselves, but decided to stay and finish their education at WPUNJ.

Personal issues were most frequently listed as the major reasons leading to students' departure from WPUNJ. These issues included:

- ◆ Students felt college wasn't for them and decided to work full-time
- ◆ Students did not like the WPU atmosphere
- ◆ Students transferred to a community college or school that offered majors not offered at WPU
- ◆ Students faced family or personal problems

Financial difficulties were the next major reason listed by surveyed students.

There was no apparent gender difference between those leaving WPU. Most of the students who left, however, were freshmen or sophomores, and a large percentage (46%) have now joined the labor force.

A Non-Retention Story from WPU *

What accounts for the low retention rates among first-year students in WPU? Why does our institution "lose" nearly one fourth of the freshman class before the second year of college? These questions were in my mind when I saw John (pseudonym) a few weeks ago and invited him to drop by my office for an informal interview.

John was part of my Freshman Seminar course and my Anthropology course a semester ago. From very early, he expressed interest in transferring to a different school. I often asked him why he wanted to leave and he always replied, "My friends are in other schools!"

John was one of the most committed students in my Anthropology and First-Year Experience classes last fall. He frequently dropped by my office to discuss course materials, inquire about grades, or fish for extra-credit points. He tried very hard to do well because he knew that the GPA was important to transfer to another school.

This spring, soon after the semester started, he dropped by my office to ask for a recommendation letter. Since then, he visited periodically to share application news, chat about courses, and dream about his transfer plans. One day he came with a big, huge smile, and I knew he would leave WPU.

When John came for an "interview", he was already accepted in the other school of choice. I thought it would be a good opportunity to ask him about his college experience at WPU, and why he persisted on transferring out of this school. This is what he told me...

"I came to WPU because I wanted to play safe. I gave more importance to social life than to studies in high school and knew that I would not be accepted by my preferred colleges. I chose to join a four-year school instead of a community college because it would make the transfer easier. When I joined WPU, I thought, if I like it I will stay, but I still don't like the school. This is a commuter college; there is very little to do. I have talked to friends who dorm here and everyone tells me it is a very boring place. I want to be in a place that has college life and is city-like, not in a college where students go home right after classes. There is another reason for why I want to leave WPU. Students don't care much about studies in this school. My classmates get a poor grade, and they are happy with it. There is a different mentality in other schools; students want to achieve more. I need peer-pressure to do well and accomplish much more."

I find John's story compelling and insightful. He may not represent the majority of non-retained freshmen, but he captures a reality frequently articulated by high-achieving students. Our college life, both socially and academically, is not invigorating enough for many committed students. John is going to pay higher costs at the new University, but he thinks it will be worth it. He wants a 'rich' college experience, one that he has not been able to find at WPU despite new friends and relationships.

- Maria Villar

Dealing With Student Expectations *Jyoti Champanerkar, Mathematics*

Returning math tests to non-math majors can be daunting. Firstly, there is frustration on the part of professors that students didn't perform well in spite of review sheets and review sessions, and secondly, students are invariably surprised and shocked with their scores. Sometimes the disparity between expectations and actual scores is so significant, that it can leave the instructor shocked in return. Surely, there are similar stories floating around in the hallways of other departments. While under-prepared students and students with math phobia might not be able to surmount their math phobias and mathematical shortcomings in a few weeks before the first test, or in a few more weeks before the second test, they certainly can have realistic and reasonable expectations.

In one entry-level math class, the disparity between the students' expectations and reality only increased, test after test. Neither the disparity nor its increase could be satisfactorily quantified. More so, the students' could not be helped to be more realistic about their expectations. The individual expressions of shocks lead to unhappiness, and eventually to students tuning out of the class; this was disturbing. In an attempt to measure the disparity between expectation and scores, the *shock index* defined below was used.

Shock Index: *Shock* or *Shock index* of a student is a measure of disparity between reality and expectation. In particular, for a test score,

$$\text{Shock Index} = \text{Actual score} - \text{Expected score}.$$

If the value of *shock* is negative, which is usually the case, the student is shocked and unhappy. If the value of *shock* is positive, the student is pleasantly surprised. *Shock index* can take any value between -100 (a totally devastated student) and +100 (an ecstatic student with rather low self confidence) when a test is based on a total of 100 points.

Findings: In Fall 2010, for one entry-level math class, it was found that after Test 1, 81% of the class was shocked and 19% pleasantly surprised. Whereas, after Test 2, 74% of the class was shocked and 26% pleasantly surprised. The above mentioned percentages take into account only respondents who wrote what their expected score was and actually took the test.

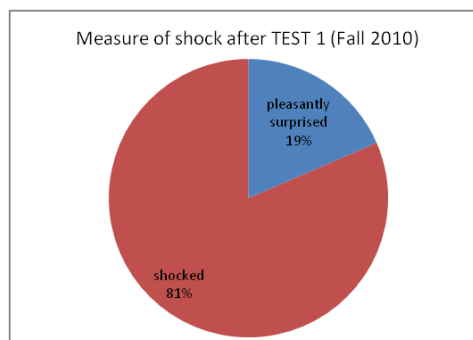


Figure 1. Measure of Shock after Test 1 (Fall 2010)

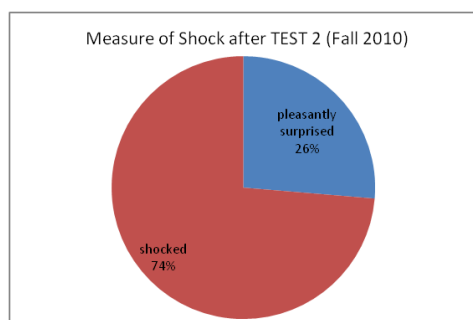


Figure 2. Measure of shock after Test 2 (Fall 2010)

The *average shock index* was -16 after Test 1, and -16.4 after Test 2, while the respective medians were -18 and -14.

There was something more interesting. As mentioned above, only students that had written both expected score and actually took the test were included, which happened to be almost the whole class for test 1, but not for test 2. About 39% of the class, did not write an expected score for the 2nd test. Optimistically, one can think of these students as being in the process of introspection, and denote them as neutral (*zero shock index*), that is neither surprised nor shocked after tests were returned. Including the neutral students gave the average shock index for the class after test 2 as -10.07.

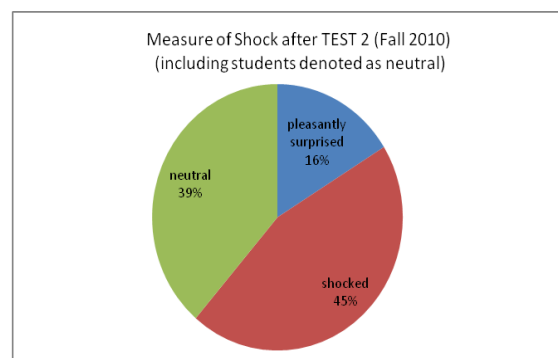


Figure 3. Measure of shock after Test 2 (Fall 2010) including neutral students

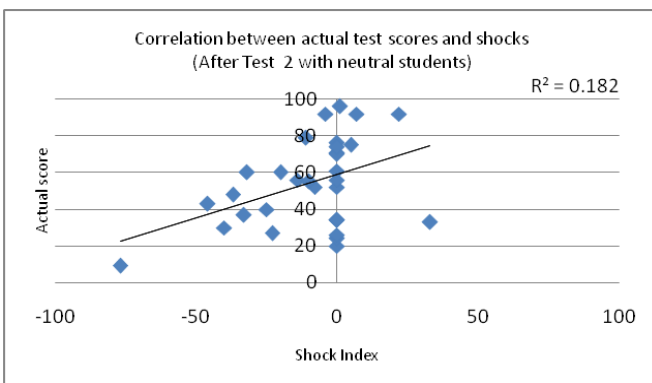
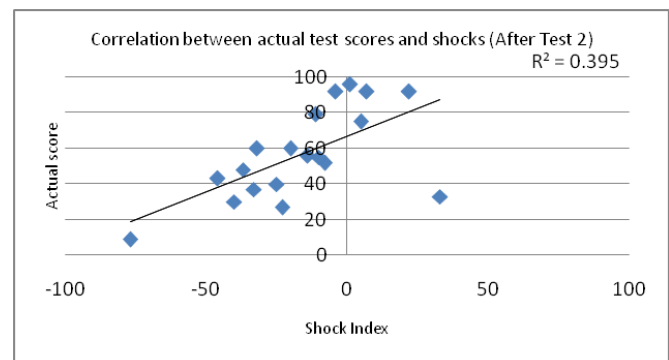
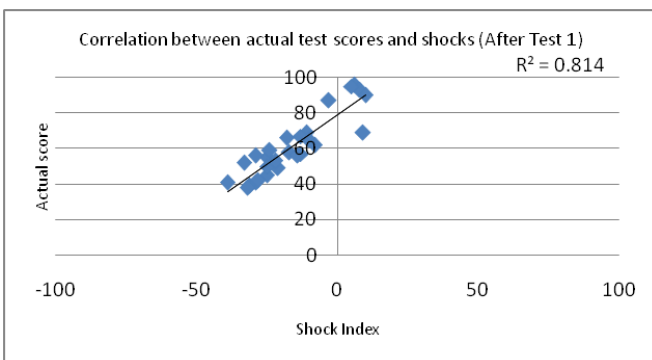
Summary of results:**Table 1. Summary of results.**

Parameter	After Test 1	After Test 2	After Test 2 (including students denoted as neutral)
Average Shock Index	-16	-16.42	-10.07
Median Shock Index	-18	-14	0
Standard deviation	14.24	25.5	21.36
Range for shock index	-39 to 10	-77 to 33	-77 to 33

Other Observations: It seems that while majority (81%) of the class was shocked after Test 1, the range is more compact (-39 to 10). After Test 2, a lower percentage of students were shocked (45% when including neutral students), but the range (-77 to 33) was bigger. This means that at least one student demonstrated very unrealistic expectations and at least one student underestimated his/her own performance more than before. Standard deviation after Test 2 (with or without neutral students), was much greater than the standard deviation after Test 1, indicating that the *shock* was dispersed farther away from the mean after Test 2 than after Test 1.

A plot of actual test scores against the shock index for each of the tests is shown below. A strong positive correlation between actual test scores and the shock index, indicate that shock index might be a good predictor of how well they do on the test.

In the future, *shock index* would be beneficial to help our students reflect and introspect in general and in particular regarding test scores. It would also be interesting to compare the *shock index* of math major and non-math major students in math and non-math courses. Most of all it would be interesting to use shock index to enhance students' performance on tests.

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Please feel free to send your comments and suggestions to Jyoti Champanerkar at: champanerkarj@wpunj.edu