

## Measuring Student Momentum, Credits Earned per Semester and more

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### Lessons

- 1) Students who graduate start fast. They earn more college credits. They earn more developmental credits. They have a higher GPA in their college-level courses.
- 2) Students who graduate slow down over time. Those who take longer, go more slowly. Still, they always have higher momentum than students who eventually drop out.
- 3) Passing developmental courses in their first semester is an important success strategy for students who go on to graduate.
- 4) Students who are still attending after six years, students who drop out and students who transfer before getting a degree resemble each other in momentum more than they resemble those who graduate. Students who eventually transfer, however, often start with slightly more momentum than those who drop out.

### Outcomes by Starting Point

The Fall 2010 semester new student cohort consisted of first-time and new transfer students who either dropped out, graduated, transferred to another college, or were still enrolled after six years. In Figure 1 we see that the largest group were first-time students who dropped out.

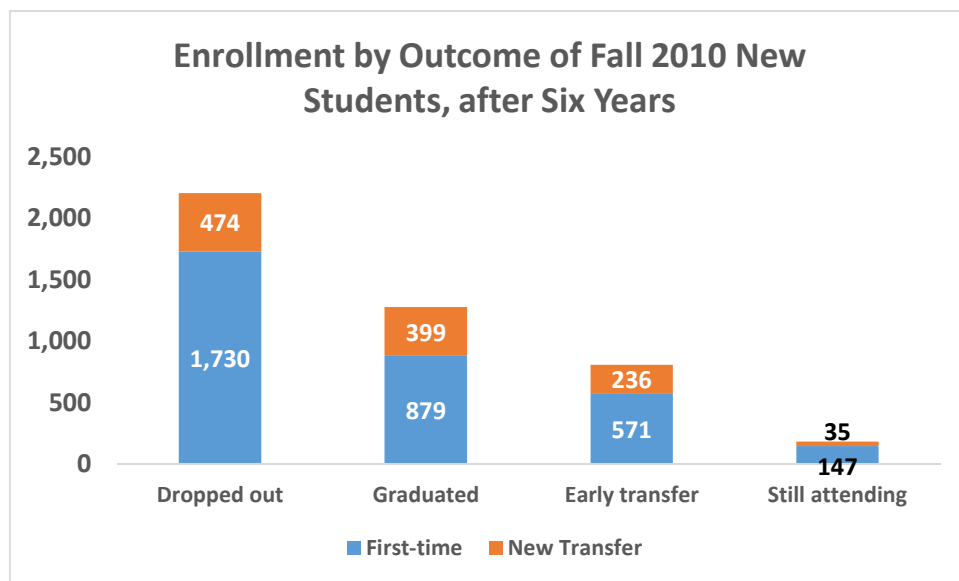


Figure 1

### Persistence by Outcome and Starting Point

In Figure 2 we can trace the enrollment of each of these four cohorts. Students who graduate leave upon graduation. Students who transfer leave to attend another college. Students who

drop out cannot be found in the enrollment records of any college. Students who are still attending, attend various semester to various degrees. (Any student who had not graduated or transferred and who was enrolled either Spring 2016 or Fall 2016 was counted as still enrolled.)

In Figure 2 we can see the greater persistence of students who graduate. In another analysis we have seen that new transfers students tend to begin graduating earlier than new first-time students, as is only reasonable. Nevertheless, the persistence of students who transfer is very similar to that of those who drop out. The timing of the decision to transfer appears very similar to the timing of the decision to leave college altogether. This suggests that students thinking of leaving school altogether might be easily convinced to try another college. More research and testing would be needed, however, to support this.

We also found that regardless of whether the students began as first-time or new transfers, their persistence, credit earning and GPA patterns varied more with their outcome, than their starting category. For that reason, the graphs that follow combine first-time and new transfers. The patterns are also much easier to appreciate in the simplified form.

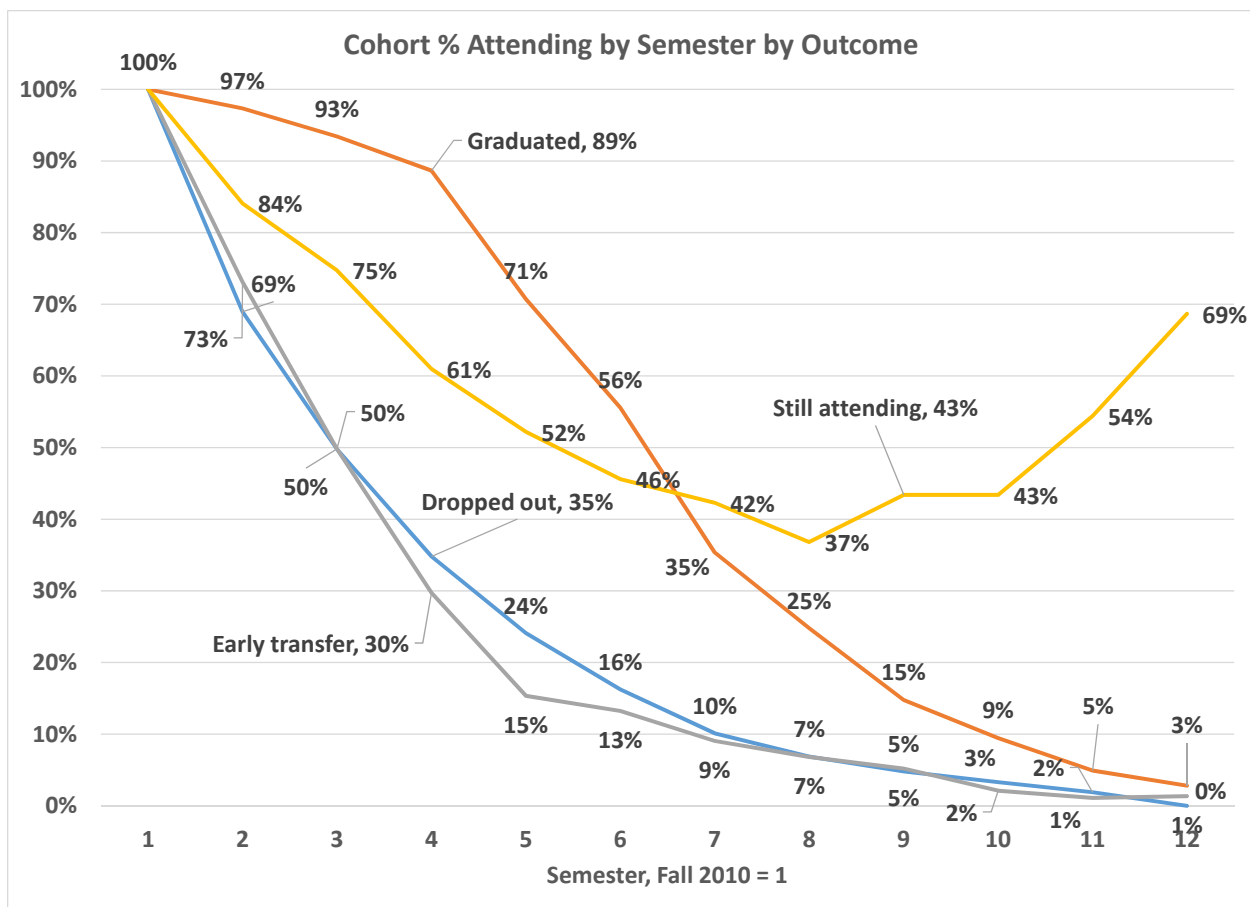


Figure 2

### **Average College Credits Earned by Outcome**

Figure 3 shows the stark differences in momentum by students who ended by graduating. In the first semester, students who graduated had earned 4.3 more credits than students who dropped out, and 3.5 more credits than those who are still attending with no degree after six years. Students who transferred early were intermediate between these, earning 2.1 credits fewer than those who would later graduate.

In their third semester, students who would later drop out or are still enrolled earned 6.4 college credits fewer than those who graduated.

These averages are only of those from the cohort who attended in each of the semesters beginning with Fall 2010. By the third semester, approximately 40% of those who drop out have already dropped out. Thus, the remaining “not-yet-dropped-out” students should be considered “more successful.” This explains why their average credit load does not drop, although it becomes more erratic as fewer students are included.

On the other hand, the cohort of those who graduate falls more slowly as shown in Figure 2. The remainder are, almost by definition, those who are taking lighter loads, and, perhaps failing an occasional course. The early transfer cohort more closely resembles the graduated cohort, except that their ability to earn credits each semester ranges between 60% and 75% of those who graduated.

Note also that it is not until the sixth calendar semester (not attendance semester) that the average student who graduates reaches 60 credits.

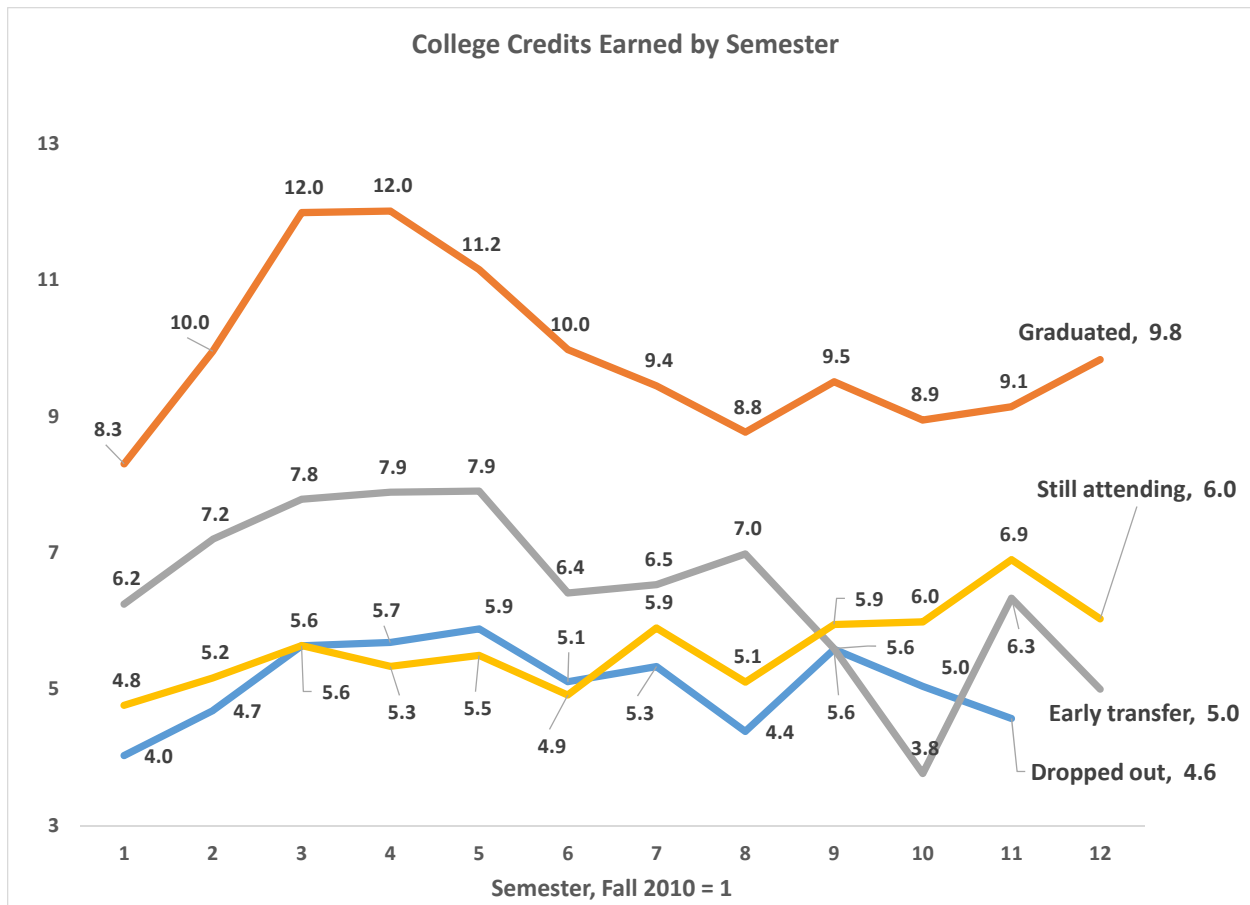


Figure 3

### Average Equated Credits Earned per Semester by Outcome: Giving Credit to Developmental Work

When we add to the college credits, credit for developmental courses and (the old) freshmen seminar, what appeared to be a picking up of momentum followed by a decline appears now to be a steady decline of momentum as shown in Figure 4.

Students who transfer out early, drop out or are still attending appear to cluster closely together, well below the numbers of equated credits earned by those who graduate. All start high, but by the eighth semester, those who remain are averaging a rate that is about 60% of the rate for all those who began in the first semester.

Although it may be an anomaly of this cohort, those who will graduate experienced a dip in the second semester, as though the burden of trying to get developmental out of the way and still earn credits caused them to want an easier semester in the spring. Still, their “easier” semester was nearly 80% more work than those who would not graduate from LaGuardia in six years.

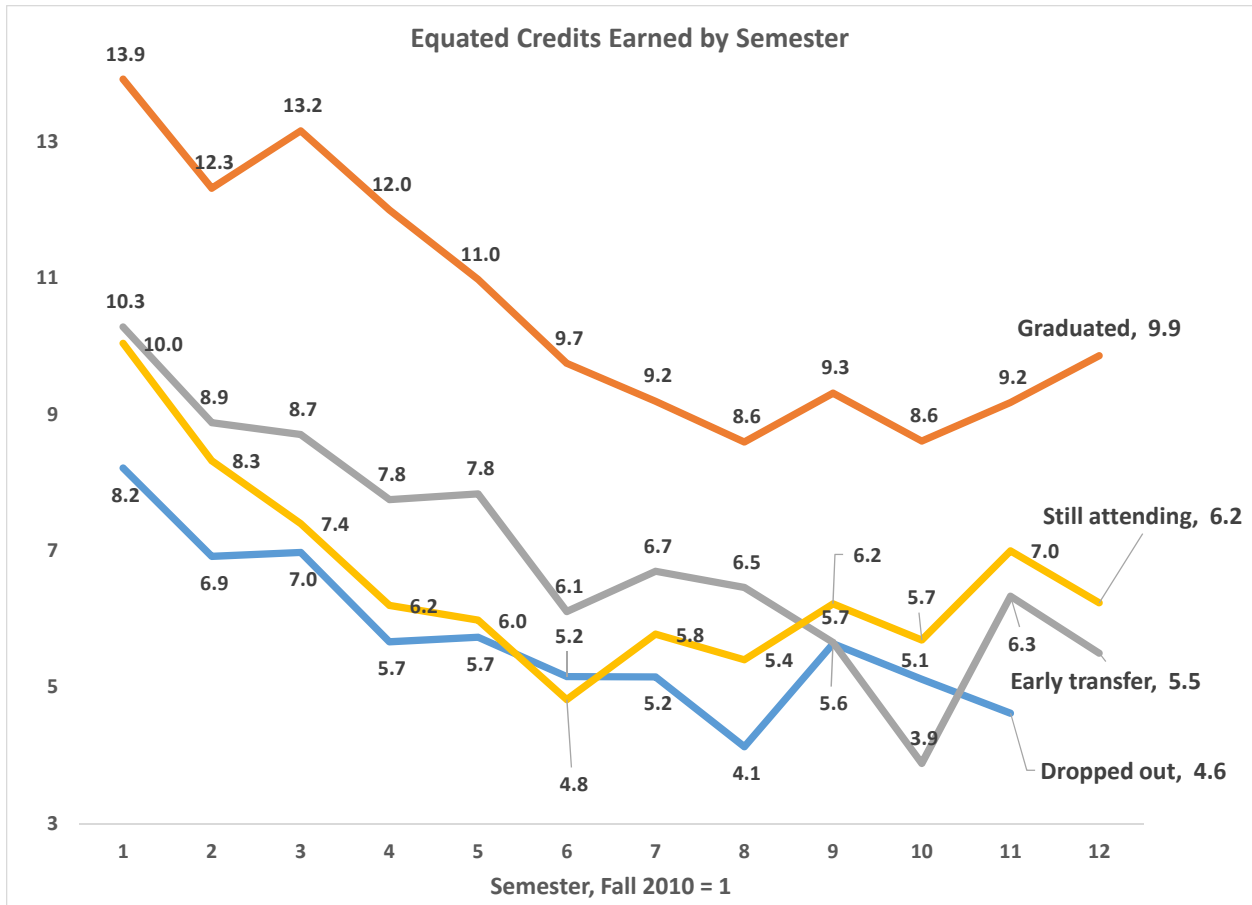


Figure 4

#### Average Quality Points: College Credits Earned times GPA by Semester

Figure 5 suffers the same omission as Figure 3 in that it is best based only on courses with college credits. Many developmental courses are pass/fail and are not included in the GPA. Still, in the fourth semester, this measure of momentum shows that those who will graduate are moving more than 2 ½ times faster than those who will drop out.

This is also a challenging measure of momentum in that four credits of C are the same as two credits of A: 16. While the comparison feels like apples and oranges, it still may be valid. A student moving slowly with good grades may be the same as a student moving quickly with mediocre grades.

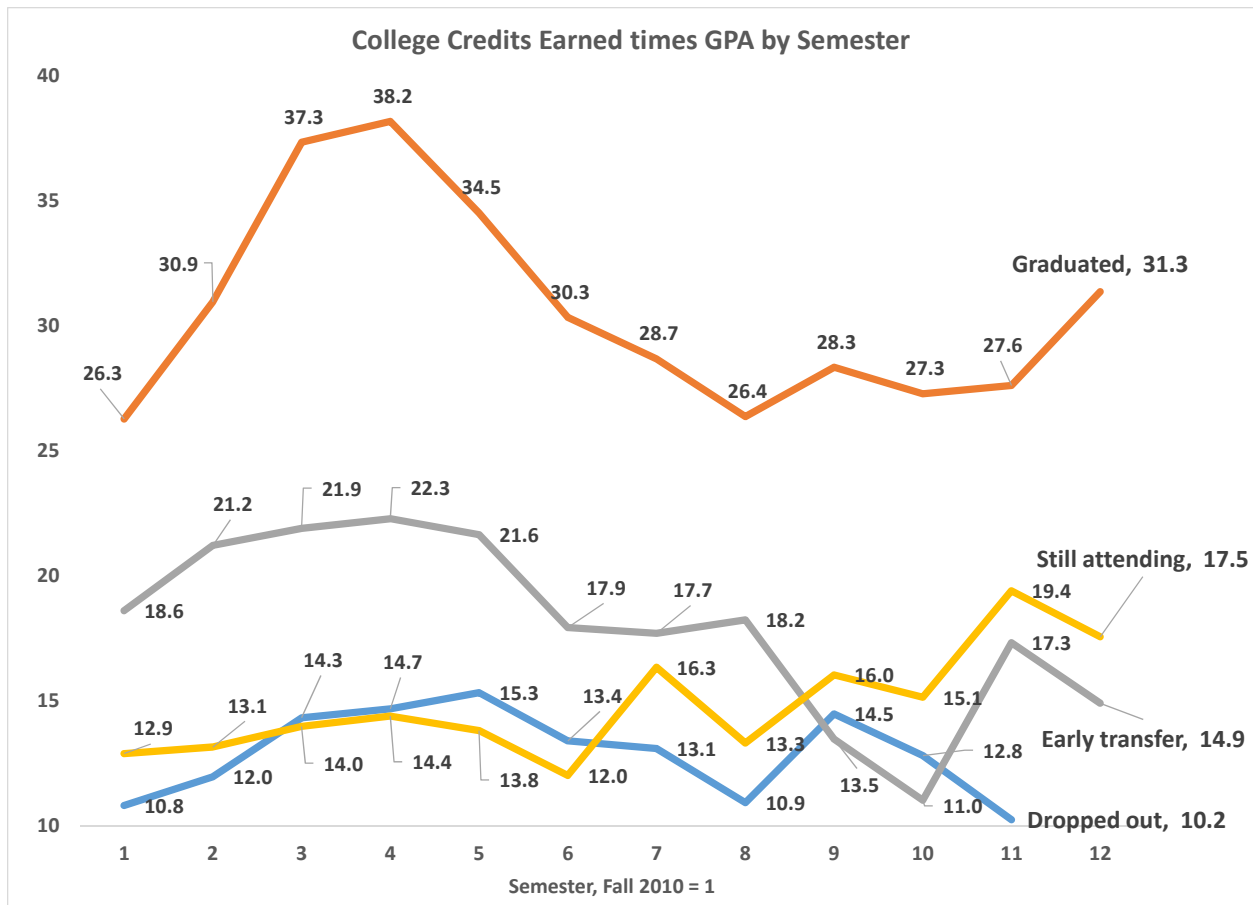


Figure 5

**Average False Quality Points: GPA times Equated Credits Earned**

Or maybe these should be called ersatz quality points. Although the GPA does not apply to all the credits in equated credits, the two measures are combined for what they are worth independently. The GPA indicates the strength of commitment to studying for credit courses and the equated credits earned measure the progress made in working through required developmental and college-level courses.

The message is the same, without the slow start for students who graduate as they work their way through developmental credits: students who graduate earn two to two and one-half as many false quality points each semester as students who eventually drop out. Students who transfer earn more than those who eventually drop out, but are closer in their progress to those who drop out than to those who graduate.

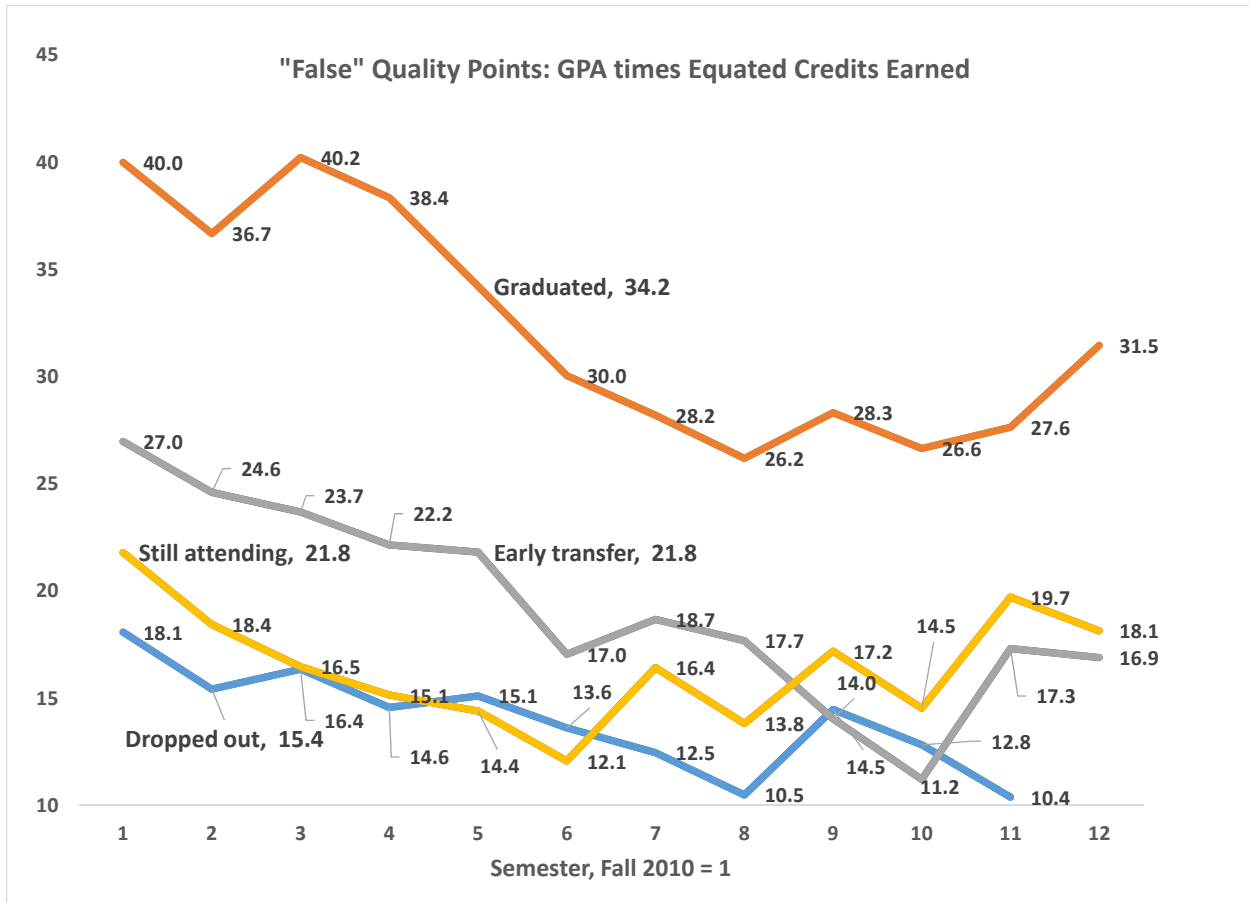


Figure 6

### Semester GPA by Outcome Group

Finally, when we look at quality points and false quality points, we have to ask, what is really driving the difference in apparent momentum between students who will graduate and those who will drop out. Is it GPA or credits earned? The answer is “both.”

Figure 7 shows the difference in average GPA among the various outcome groups. Average first semester GPA of those who will graduate is 2.76, while that of those who will drop out is 1.67. In Figure 2 we can see that those who will graduate earned 13.9 equated credits, while those who will drop out earned 8.2. The figures are obviously correlated. If you fail a course, you don’t get credit. Thus, it is not surprising that the graduates’ GPA is 65% higher than the drop outs’, while their equated credits earned is 70% higher. Neither measure dominates.

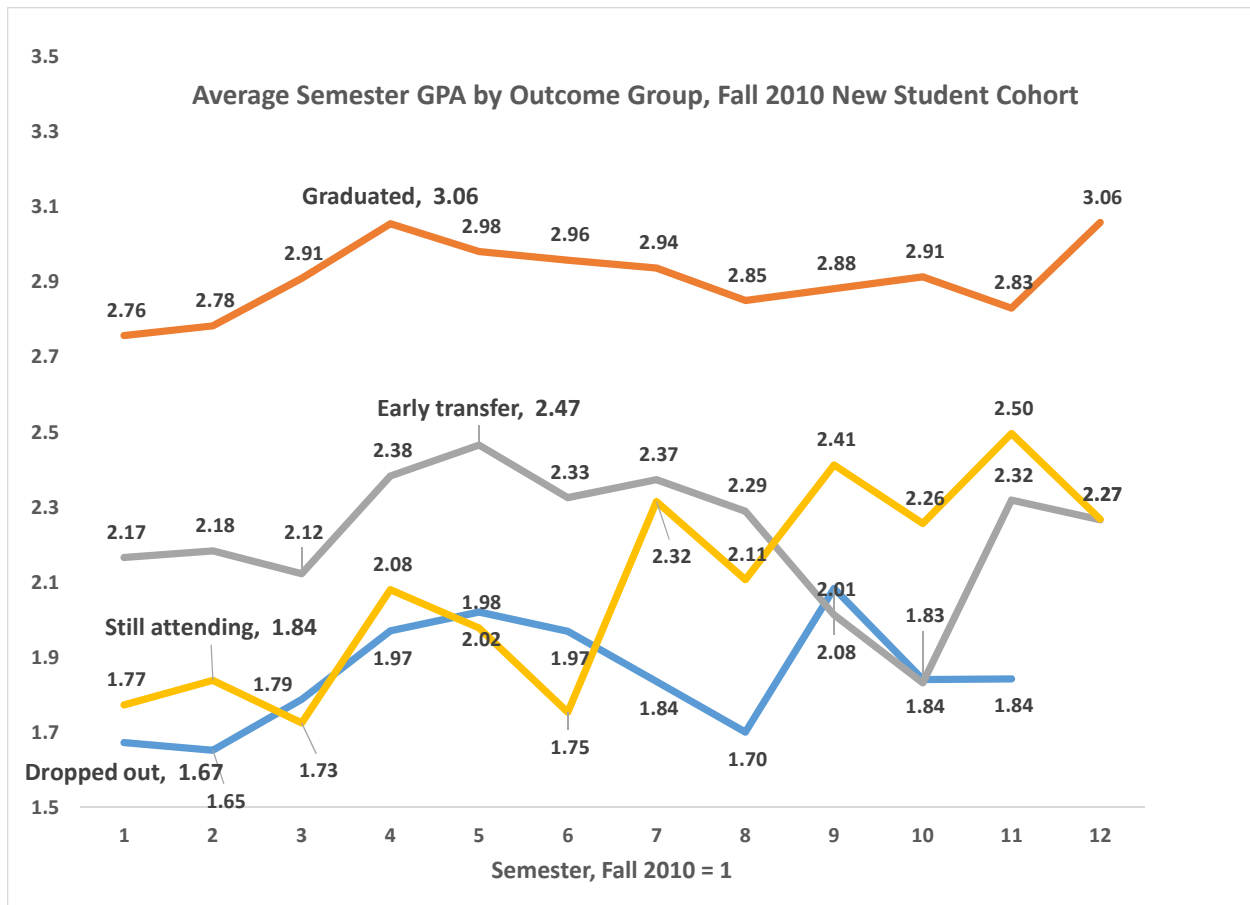


Figure 7

### Other notes

A discussion with Professor Jeffrey Weintraub led to this exploration of momentum.

Other more complex measures were also explored, including average cumulative credits and quality points earned and average cumulative credits and quality points earned per semester attended. The added complexity was not rewarded with added contrast among the groups. Simple measures of accomplishment in each semester were more easily understood and still showed the greatest disparity among outcome groups.