

Success of First Term Students, Fresh from High School

What makes a successful student transition from high school to university? Most students see a big drop in their average grade from Grade 12 to first-year university. For instance, in the fall of 2013 for students entering the University of Regina straight out of high school, the high school admit average was 83.2%, compared to a first term university GPA (UGPA) of 67.7%. That's the average difference only; a small number of students actually do better in university than in high school.

Regina-area school boards and the University of Regina are working together to try to understand why average grades drop by so much and why some students manage the transition to University much better than others do. As part of this exploration, we've started by administering three surveys to all Saskatchewan-based first-year University of Regina students, students who have entered the University of Regina straight from high school.

The survey went out to approximately 1400 students who entered the University in Fall 2013, and similar numbers in Fall 2014 and Fall 2015. For Fall 2013, 372 of these students replied, for Fall 2014 475 students replied. and for Fall 2015 we have 583 full or partial replies. After cleaning up incomplete surveys and unusable data, from the merged 2013 + 2014 surveys we end up with about 650 usable results, and for the (unmerged) 2015 survey we had 528 usable replies. These surveys were then matched with the students' high school records and first-term university data. We then did a statistical analysis to find out what factors might affect their success in their first term in university. This document is a short summary of some of the key findings.

Notes:

1. The 2013 and 2014 surveys had a set of common questions, but also had some divergence in some of the questions. Merging the data roughly doubles the sample size and allows for sharper statistical analysis on the common survey questions, but misses the analysis of the divergent questions. In addition, the 2015 survey had quite a different set of questions, so it was not merged. Therefore, some of the key variables were only analyzed in either the 2013 or the 2014 or the 2015 regressions. Below, all results held for the combined analysis, except that results from only the *2014 regressions are in italics*, 2013 regressions only are underlined, **while 2015 results are in bold**.

2. Statistical analysis primarily done by Harvey King, but with strong support from Kate McGovern and Miranda Pearson from ORP, Rick Kleer from Arts, and from Len Brhelle, the former University-School Divisions Transitions Management Committee consultant.

1) Key Variables Affecting Student Performance

- The higher High School GPA, the higher First Term GPA. (Your English B30 grades had a separate and stronger effect, and also leads to better attendance. **Similarly, if you felt high school had prepared you well for university math, this has a strong impact.**) This is the strongest effect. See Figure 1 below.
- If you speak a second language at home (BUT not affected by whether or not you are a first-generation Canadian), you do better. First and second generation immigrants do better on average.
- Gender and aboriginal status did not make a difference (controlling for high school grades).
- The higher the percent of classes attended, the better you do. See Figure 2 below.
- The better your work on assignments (*more effort on them, higher percent handed in*), the better you do. See Figure 3 below.
- *Better effort at note-taking, better grades. **More effort paying attention in class, better grades***
- The more hours you put into studying, the better you do. The better the quality of your studying (e.g. evenly over term versus cramming), the better you do. **A very strong positive variable is if you stated you planned your study time well (see Figure 5 below).** *Too much time highlighting text, the worse you did.*
- *Students who rate themselves as persistent had more effort and better attendance. See Figure 4 Below.*
- **Students who stated "I take responsibility for my own learning" did better, see Figure 6 below.**
- **If you stated you were more likely to find excuses not to work (indicative of a lower ability to stick to tasks), you did worse.**
- *Students who moved to Regina for university, less effort and less attendance. **Students who lived alone also did worse.***
- The more you work at a paid job, the worse your attendance, the lower your studying hours, and the worse you do.
- **Taking care of children turned out to have a negative impact – the more hours of childcare you had to carry out, the weaker your grades.**
- Too much lecture focus by university profs leads to less attendance and poorer study habits.
- If you are in Engineering, your grades are lower (likely due to a heavier workload in Engineering). If you are in Fine Arts, your grades are higher (likely due to performance-based courses). There are also a variety of differences by faculty in student attendance, assignment work, etc.
- The illness of others (family) can have a negative impact on your grades, as can mental health factors by reducing the quality of your assignment work and the quantity of your studying and therefore grades.

2) How Students Can Improve their Grades in Transitioning to University

The table on the next page compares an 80s Student to a 50s student in First Term University, based on the three surveys both jointly and separately. *Italicized are from the 2014 Survey only, underlined from the 2013 Survey only, bold from the 2015 survey only*, normal text from the 2013-14 joint work.

80s Student		50s Student
Worked diligently in High School – 92.3% High School Average – 91.2% ENGL B30 Average		Did not work as hard in High School – 76.3% High School Average – 74.6% ENGL B30 Average
Missed only 3.3% of classes		Missed 10.4% of classes
<i>78% put a high effort into note-taking in class</i> 89.6% said they put a high effort into paying attention in class		<i>48% put a high effort into note-taking in class</i> 44% said they put a high effort into paying attention in class
Better effort on their assignments – 84.1% have “excellent ass’t habits” – <u>Only missed 1% of assignments</u>		Poorer assignment effort – Only 54.9% have “excellent ass’t habits” – <u>missed 5% of assignments</u>
Stronger Study Habits – Only 10.2% have poor study habits – <i>Only 12% of their study time spent highlighting text</i> – 49.5% said they "mostly or very much" planned their study time well – 16.5% said they "mostly or very much" frequently found excuses for not getting down to work – 84.5% agreed "I take responsibility for my own learning"		Weaker Study Habits – 29.6% have poor study habits – <i>Spent 24.4% of their study time highlighting text</i> – 36% said they "mostly or very much" planned their study time well – 26% said they "mostly or very much" frequently found excuses for not getting down to work – 68% agreed "I take responsibility for my own learning"
Only 36.2% felt drugs/alcohol affected their grades negatively		57.3% felt drugs/alcohol affected their grades negatively
Only 54.3% worked, and they worked half as many hours as the 50s students		67% worked, and they worked twice as many hours as the 80s students
Only 7.1% had to do childcare, and they worked many less childcare hours than the 50s students		14% had to do childcare, and they worked 2.7 times as many childcare hours as the 80s students

3) How Can We As Educators Support Student Success?

- Encouraging students to work in high school, to get the necessary background knowledge to help them in university.
- Encouraging/rewarding attendance – not just by participation marks, but perhaps by pop quizzes, interactive features, interesting classes! Too much lecture time reduced attendance.
- Helping students to learn how to take notes carefully in class, by demonstration or links to online help, the Student Success Centre, etc.
- Work to make classes interesting and dynamic so that they want to pay attention in class!
- Helping them understand the role of assignments, not only in encouraging students to do them, but also in putting appropriate effort into doing them.
- Talking about study habits – students who studied more evenly over the semester and who planned their studying carefully did better, and highlighting text by itself is not useful.

- Instructors can potentially help students in both of the last two areas by
 - Acting like an intellectual trainer: assigning smaller, more frequent assignments/quizzes to encourage even studying of material
 - Not providing exact lecture notes on the web to encourage actual deeper note-taking.
 - Having reading assignments that encourage deeper reading.
- Supporting the students whose personal circumstances have a negative impact – those who move to Regina to attend school, those with family issues, drug/alcohol issues, self-esteem issues, etc.
- In their own comments, many students noted they were not prepared for the level of independence required of them in University, or the work load. Realistic information on that in the first week of classes would help.
- And we are not sure how, but working to teach students to be more “persistent” – to work at their schooling and not give up, to be responsible self-learners
- Help them to understand that working outside school, whether paid work or childcare, comes at a cost in terms of grades and success. **And of course, this also implies that if we or society can help them finance their education, it will have a strong impact.**

4) Selected Graphs

Figure 1

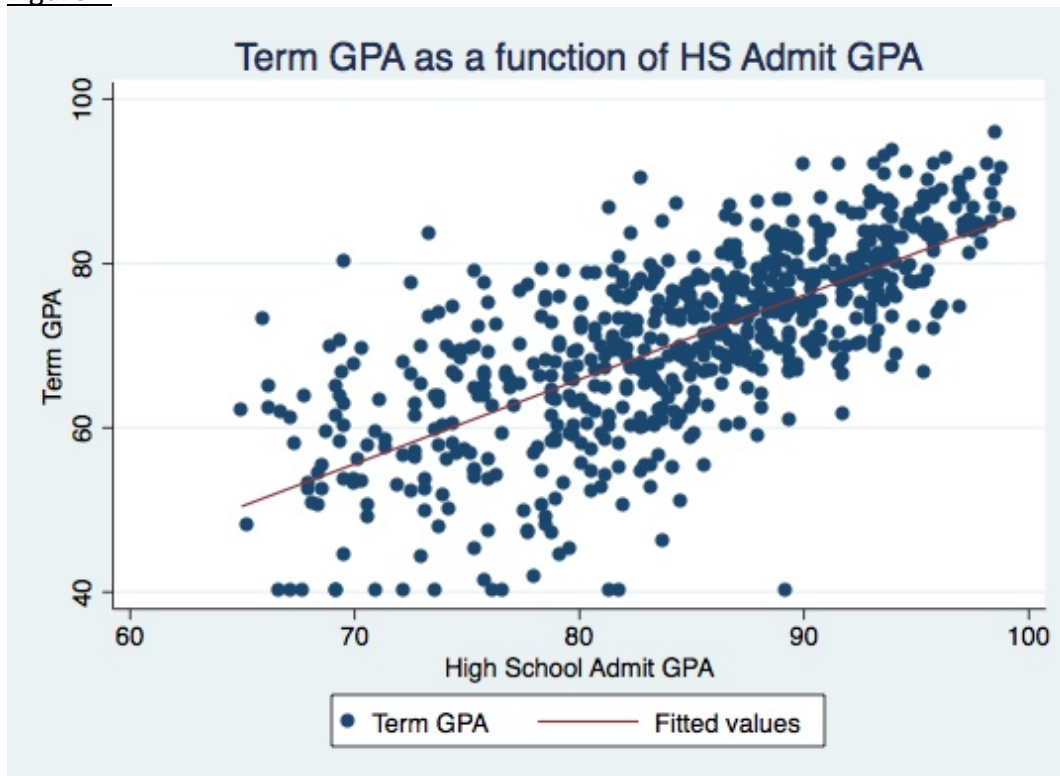


Figure 2

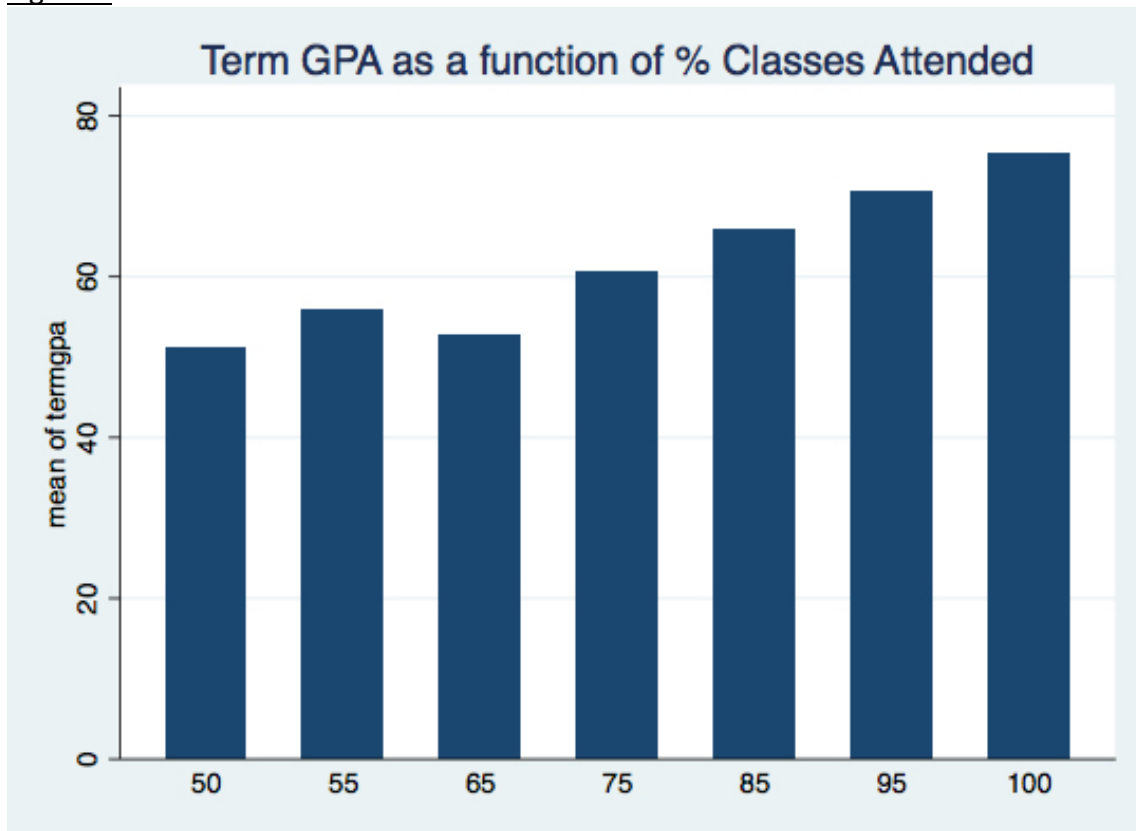


Figure 3 Term GPA as a function of Assignments Effort (2014 data only)

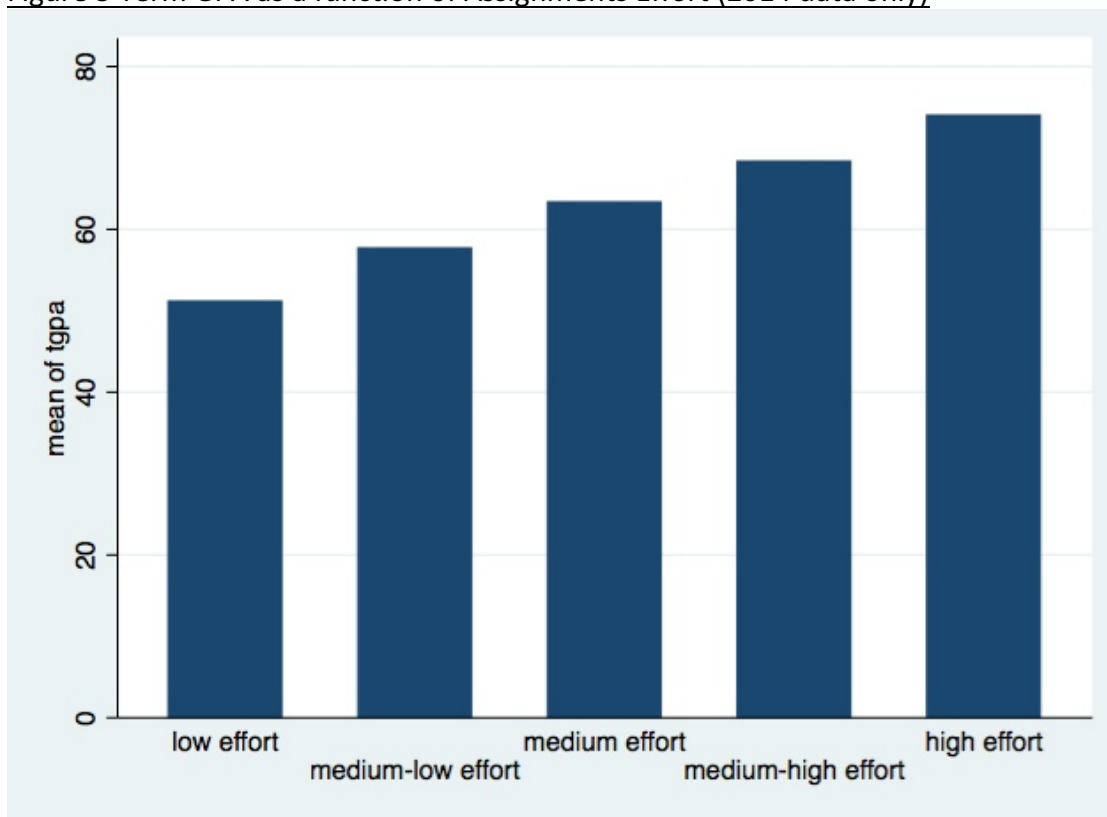


Figure 4 Term GPA as a function of Persistence (2014 data only)

Indicate how well the following statement describes you: I work hard at my goals

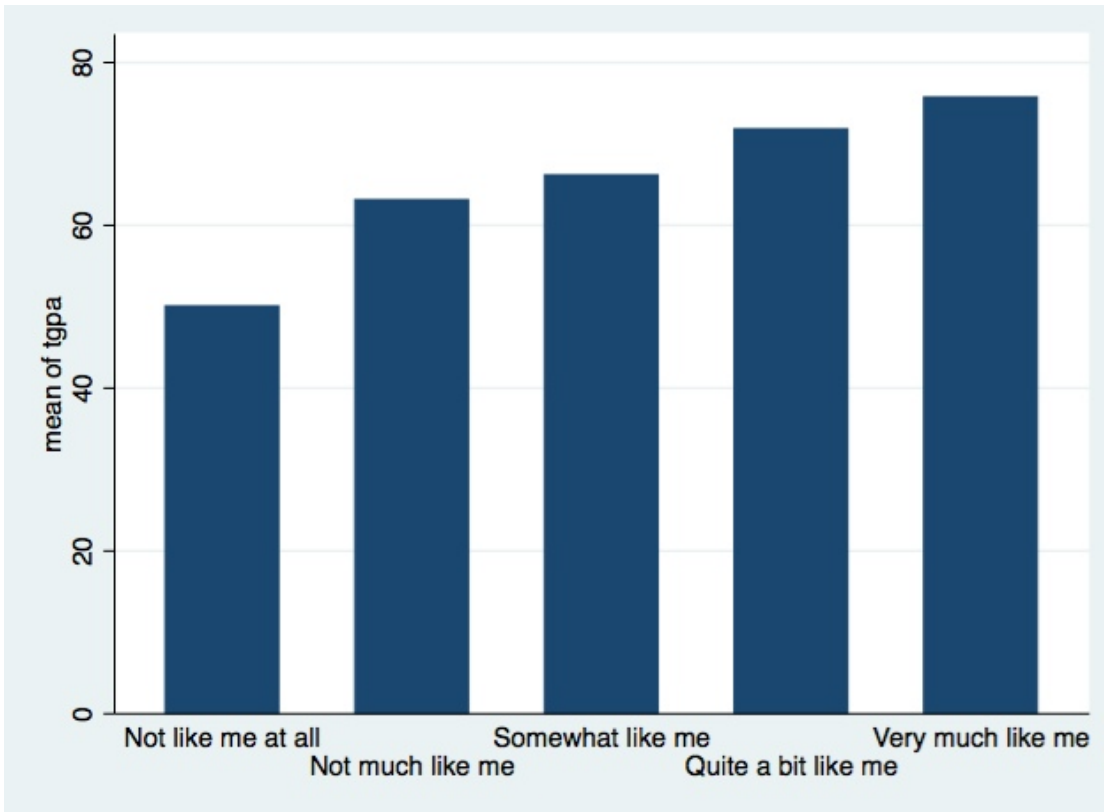


Figure 5 Term GPA versus "I plan my study time well"

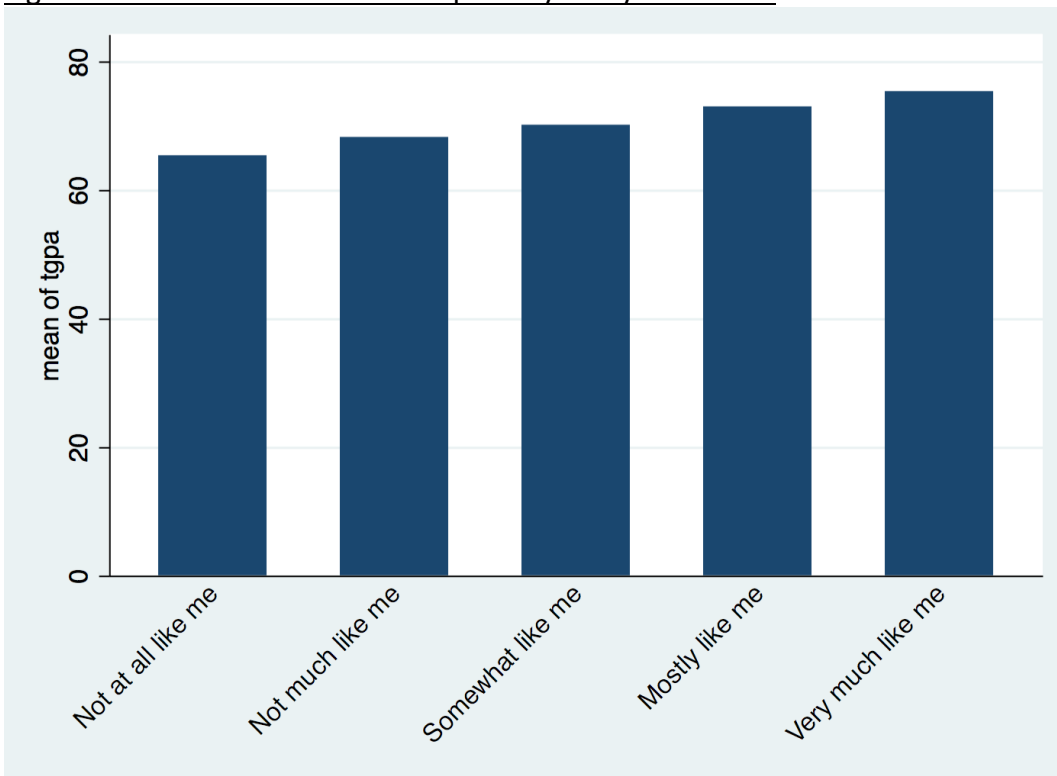


Figure 6 Term GPA versus "I take responsibility for my own learning"

