

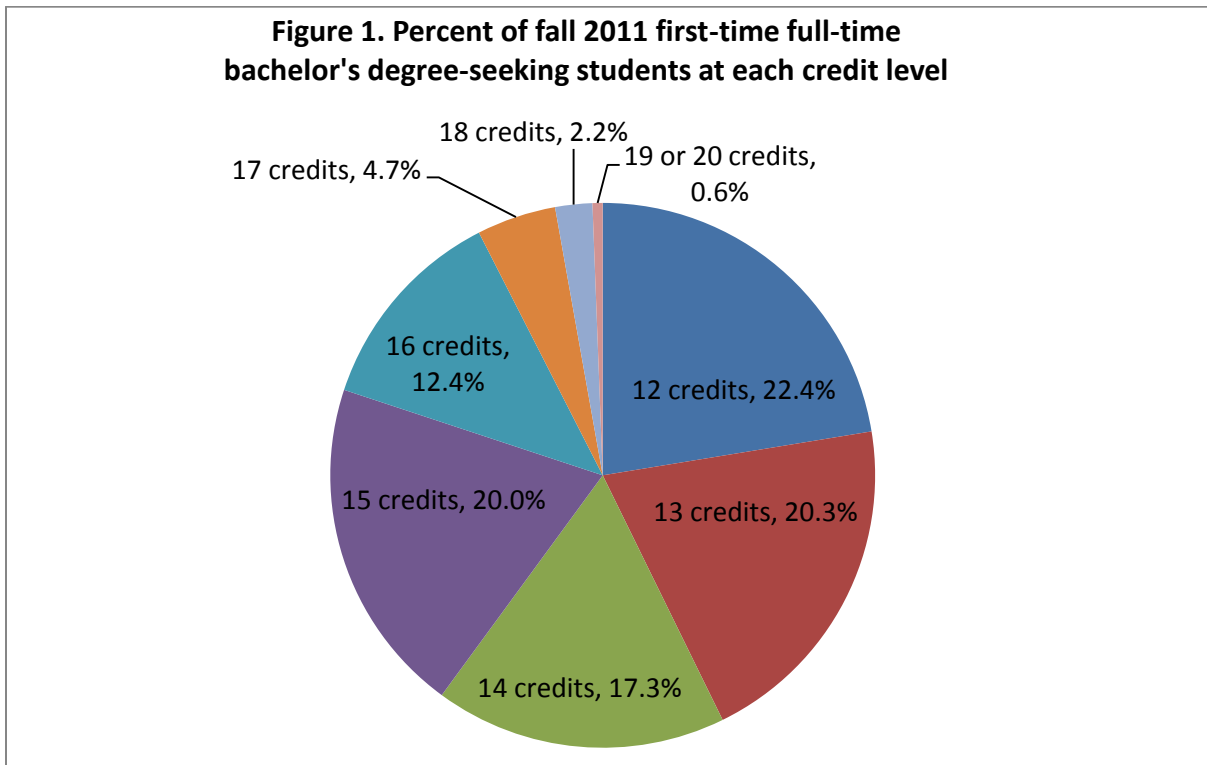


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## **Do full-time students taking fewer credits their first semester have greater success at Boise State?**

Students are commonly advised by their parents or others not to take too many courses in order to better ensure their success when they register for their first semester. The assumption has been that taking 12 credits, for example, allows students to spend more time on their courses and will result in higher grades. But is it true? Does such a relationship exist? The purpose of this study is to report on the relationship between the number of credits taken by first-time full-time Boise State University students during their first semester and their success as measured by first semester GPA and retention one year later.

Figure 1 below shows the distribution of credits taken by fall 2011 first-time full-time (FTFT) bachelor-degree-seeking students (N=2,128). Note that 60% of the students took fewer than 15 credits their first semester.



In addition, students who took fewer credits were less academically prepared, as measured by admissions index scores. For the fall 2011 FTFT cohort, students who were taking 12 credits had an average admissions index score of 52.4, while those taking 14 or more credits had mean index scores ranging from 58.1 to 59.2. These mean differences were statistically significant,  $F(6,1840)=8.54$ ,  $p<.0001$ . Students taking 13 credits had mean index scores that fell between the 12-credit group and the 14-or-more-credits group.

Finding that students with fewer credits also have lower admissions index scores provides evidence that academic preparation (i.e., index score) must also be considered when analyzing the relationship between credits taken and academic success.

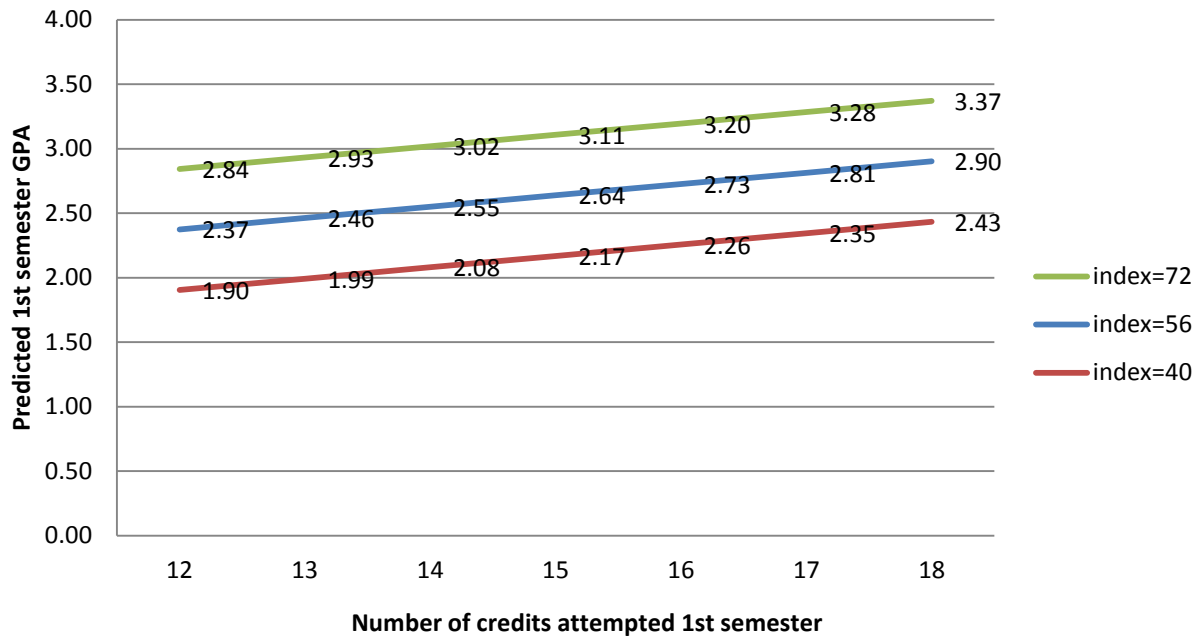
**After accounting for the effects of admissions index scores, do first semester GPAs differ based on the number of credits that students attempt?**

Admissions index scores were developed to enable the university to select students who are most likely to succeed in college. The index score is based on a combination of high school grade point average and scores on a college entrance exam. Because students over the age of 24 are not required to present test scores in order to be admitted, the ensuing analysis is based on the 1,840 or 86% of the fall 2011 first-time-in-college bachelor's degree-seeking students who had test scores.

The correlation between admissions index scores and first semester GPAs was .46, which is a moderately high positive relationship between the two. The model showed that about 21% (.46<sup>2</sup>) of the variability in first semester GPAs can be explained by admissions index scores. Adding information on the number of credits attempted to further predict first semester GPA resulted in a very modest increase in the percentage of variability in GPA accounted for by the model: from .21 to .23. Nevertheless, both index scores and units attempted were significant predictors of first semester GPA.

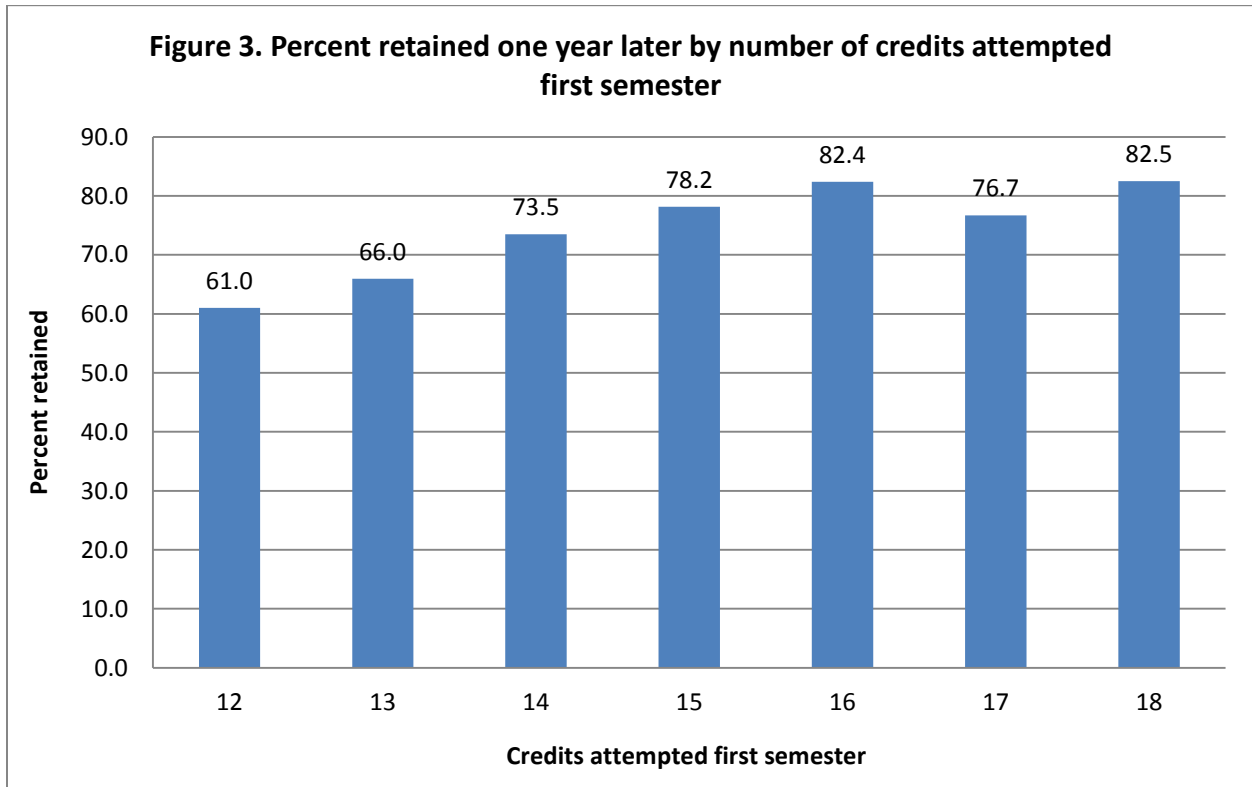
As shown by Figure 2, as the number of credits attempted increased, GPA also increased. The relationship is displayed at three admissions index levels: the mean index score of 56 for this group, one standard deviation below the mean (40), and one standard deviation above the mean (72).

**Figure 2. Predicted first semester GPA based on number of credits attempted at three admission index levels**



**After accounting for the effects of admissions index scores, does retention one year later differ based on the number of credits that students attempt?**

Do students who take more credits their first semester return one year later at a higher rate? As shown by Figure 3 below, students who initially enroll for more credits *are* more likely to return,  $\chi^2(6, N = 1841) = 53.25, p < .0001$ . Retention rates are lowest for students taking 12 credits, the minimum needed to be a full-time student.



Logistic regression analysis again confirmed that both admissions index scores and credits taken predicted retention one year later, and the impact of taking more credits was the same, whether students' admissions index scores were high or low.

**Discussion**

This analysis contrasts with current wisdom of some that taking fewer credits during the first semester is associated with a greater chance of success for students. Instead we found the opposite: taking *more* credits is related to greater student success as measured by first semester GPA and retention one year later.

Please note, however, that the present study documents correlation, and does not demonstrate causation. That is, simply because a significant relationship exists does NOT necessarily mean that simply increasing the number of credits students take will result in higher GPAs and greater retention of those students. We do not understand, for example, what leads students to enroll for fewer credits in the first place. It may be that they lack self-confidence in their ability to handle college-level work, and the belief that "I can't do it" becomes a self-fulfilling prophecy. Or they could be taking fewer credits because they don't want to spend too much time on their studies and prefer to focus on the social side

of college. Or it may be that students with fewer credits may have jobs or other drains on their time that would also relate to lower grades and reduced probabilities of being retained. In addition, this analysis was limited to younger students, and the relationship could change when older students, who do not have test scores, are included in the analysis.

Despite such a caveat, the results of this study are sufficient to provide a basis for action, if it is understood that the impacts of any such actions must be assessed to further determine the strength of the hypothesized causal relationship between credits taken and GPA/retention. Furthermore, given the very diverse nature of our student body, any actions to encourage students to take more credits should include substantial sensitivity on a case-by-case basis. It is likely that neither the wholesale advice of “always take fewer credits for greater academic success” nor the “always take more credits” approach will work for all students. Indeed, advisors who work with new students could probably provide a more nuanced interpretation of these findings and suggest additional factors to consider.