Predicting Student Success, Ameliorating Risk, and Guarding against Homogeneity in Honors

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Jerry Herron's thought-provoking essay raised three key issues in my mind that I hope to describe in this humble response to his fine work. The overarching theme of his essay was to inquire how honors administrators predict student success and how they use that predictive power wisely and objectively to admit students and maintain quality. I want to expand on this idea and point out that such algorithms ideally could also predict students at risk so that institutional personnel could mobilize support efforts more proactively. Additionally, Herron notes the honors community's appropriate and unyielding focus on academic quality at a time when many others mistake expedient completion with learning, but I want to warn that honors admissions and financial aid practices could inadvertently over-reward and attract a homogenous group of students.

Herron's suggestion to use data in the admissions process to better predict student success is excellent. What Herron is suggesting is the use of a statistical technique called regression, which is based on correlation and uses numerous variables to predict a particular outcome or behavior. In this example, an honors college collects data on current students and examines how their level of success in honors is related or linked to numerous factors that they presented as applicants. In other words, administrators build an equation or algorithm of success based on current students and then apply it to future students or applicants.

Herron was predicting success in honors based on the combination of high school GPA and ACT score. However, even more robust algorithms might take into account the predictive power of other variables like number of hours spent volunteering, number of honors courses taken, income, distance of home from campus, gender, or race. Written out mathematically, such an equation could look like this:

$$Y = a + bX_1 + cX_2 + dX_4 + eX_5 + fX_6 + gX_7 + hX_8 + iX_8$$

or

$$\text{College GPA} = a + b(GPA_{HS}) + c(\text{ACT}) + d(\text{volunteer}) + e(\text{honors}) + f(\text{income}) + g(\text{distance}) + h(\text{gender}) + i(\text{race})$$

In this example, each variable or factor that is related to success in honors (as arbitrarily measured by college GPA in this example) is weighted by a particular constant (b, c, d, etc. . .). The variable "a" is also a constant (a.k.a. the y intercept). Again, by building such an equation based on the performance of previous students, directors can make some predictions about how future students might perform in the program. As Herron points out, every honors program is different and emphasizes distinct qualities. One program might value service, and so knowing the number of hours a high school student spent volunteering could be a powerful predictor of success. Another program might place greater emphasis on independent scholarship and find that the number of high school honors credits a student earned is correlated with success. Alternatively, a program might find that being male is a risk factor, which is not preposterous given that women are now graduating at higher rates than men in the United States (Bowen, Chingos, & McPherson 29).

The point I wish to emphasize is that equations designed to predict the probability of success also can highlight risk factors that are associated with individual students and can be addressed proactively. In other words, the same equation that predicts success can flag students early in their college careers and motivate honors staff to create support systems before problems arise. For example, a program that attracts home-schooled students may find that these students tend to struggle academically at a higher rate. Knowing this risk in advance, program staff can encourage these students to live in the honors residence hall and participate in honors co-curricular activities. Staff can then track the effectiveness of this approach.

As Herron mentions, honors administrators should use data not only to make admissions decisions but also to demonstrate the value-added component of programs. Predicting and ameliorating problems before students hit a bump in the road is ideal and should lead to higher student success and retention. When admitting students, an honors program is implying that it can partner with them and provide the support they need in order to work hard and succeed. The data that equations can yield add value by allowing staff to target particular students and tailor the educational environment in a way that no for-profit or MOOC could ever dream of.

While the use of data or algorithms is not universal, most honors programs strive to create a nurturing, engaging, scholarly community that graduates students in four years. While somewhat crass, this simple metric of graduation

has become a critical issue in the national conversation about higher education. Herron's essay demonstrates that the honors community is still primarily focused on maintaining the highest levels of academic quality and integrity, but this focus is in sharp contrast to the national dialogue outside academia that more often focuses on mere completion or credentials. The honors community speaks of learning while politicians and pundits speak of earning—either diplomas or high salaries. As Bowen et al. state, ". . . it would be a serious mistake to treat all college degrees as the same or to put so much emphasis on earning a degree that other educational objectives are lost" (2).

For example, in 2010 the state of Tennessee completely overhauled the way it funds public higher education, implementing a formula that emphasizes completion as measured by number of graduates. Furthermore, the state has created a zero sum game, with institutions directly competing against each other for a limited pool of funds. The institution that shows the greatest gains in completion takes money from other possibly struggling institutions that may strive to assist students from traditionally underrepresented groups. This policy creates a vicious cycle; institutions that admirably provide access to a wide variety of students are penalized if at-risk students do not progress and graduate. While the state says it values access, the funding system tacitly encourages institutions to raise their admissions standards more than it encourages them to devise support programs, and at worst it could encourage a decrease in academic standards if left unchecked.

While the honors community must continue to put academic quality at the forefront and never apologize for excellence, it should be aware of how admissions and financial aid policies intersect with this completion agenda spreading across the United States. Herron rightly advocates addressing academic quality through more sophisticated, evidenced-based admissions policies that predict student success. While I am similarly concerned with maintaining the tradition of excellence upon which honors is predicated, I am worried that our gatekeeping efforts could backfire and negatively influence accessibility, affordability, and diversity, as measured along many spectra.

As Weiner and in turn Herron point out, honors was designed to level the playing field, providing an excellent education to a wider group of students for whom the Ivy League or elite liberal arts colleges might have been out of reach. If the honors community builds admissions algorithms based on the success of previous students, it runs the risk of recruiting more of the same students and further homogenizing programs. Couched within a laudable zeal to preserve quality, honors programs could miss students who might excel in their programs, but who currently appear as long shots based on less than adequate predictive models and resulting admissions and financial aid practices.

Similarly, as S. Georgia Nugent has recently warned, the academy should be careful not to skew the use of merit aid at the expense of need-based aid while simultaneously eroding the definition of "merit" (Gardner). Honors programs obviously should maintain high standards so that they do not become an unintentionally watered-down entitlement, another empty perk on the campus brochure along with a rock wall or water slide. On the other hand, honors leaders should be more aware of how scholarships are distributed to ensure that institutional aid practices aren't merely discounting or buying a narrow swath of "qualified" students. At the very least, honors administrators should be aware that the bureaucratic financial aid system in place in the United States is difficult to navigate, especially for the students with the greatest need to use it.

Undoubtedly, many honors leaders have been drawn to the community of honors out of a deep, principled desire to preserve good teaching and to maintain academic quality at the highest standards of our culture. Most honors programs are based on these values, which stand in counterpoint to more efficient modes of instructional delivery that prioritize credentials over actual learning (Carnicom). Honors preserves something sacred but at the same time may unintentionally support the completion agenda by catering to a homogenous group of students enticed by merit aid well in excess of need. We all agree that college should be challenging and that the honors community should invest heavily in excellence by recruiting top-notch students and faculty, but we should refrain from defining quality merely by the strength or length of the velvet rope barring entrance. As Herron notes, diversity is an important value-added component to an honors program. Merit scholarships should be reserved for meritorious achievement and not given out like participation medals to every student fortunate enough to have the right zip code. If honors leaders fail to rectify this practice, they may eventually violate the original spirit in which honors was created.

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