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A Look at TRIO and GEAR UP”*

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The Changing Landscape in College Access

The landscape of college access has shifted dramatically since TRIO was first passed in the 1960s, and even since more recent developments such as GEAR UP. Students attend college at higher rates and schoolteachers and principals set college as the goal even for students who never would have attended a generation ago. “College for all” and “college and career ready” standards are increasingly giving disadvantaged students an opportunity to prepare for the college track.

With high average rates of college entry, it is tempting to think that the college access problem has been solved, but that is far from reality. Low-income students continue to enter college at much lower rates.¹ Only 65 percent of minority students graduate from high school² and, of those, only a little over half go right on to some type of college.³

Nevertheless, the problems that TRIO and GEAR UP were designed for have evolved. Students want to attend college and most schools offer the required academic basics, but many students remain under-prepared for the academic, social, and financial demands of postsecondary education. Scholars have documented the issues—students who are motivated but directionless, enrolled in college track courses while studying only rarely, conducting consequential but ill-informed college searches, selecting colleges that are poor matches, and floundering through higher education propelled by a compelling but vague goal of getting a “college degree.”⁴ Given how easily we can predict who will not graduate from college, it is clear that something still has to be done before students finish high school if they are going to succeed in college. The landscape has shifted, but real college access remains a fundamental problem.

My comments below are based on a re-analysis of the federally funded Upward Bound experiment I conducted with Dr. Alan Nathan, as well as two ongoing field experiments in Milwaukee and published research on cost-effectiveness of college access and success strategies.⁵ After discussing Upward Bound, I recommend some general guidelines for altering federal access programs and a more aggressive federal agenda for research to understand how these programs work.

¹ Kirst, M.W. (2004). The high school/college disconnect. *Educational Leadership*, 62(3). p.51–55. Bailey, M.J. & Dynarski, S.M. (2011). *Gains and gaps: Changing inequality in U.S. college entry and completion* (NBER Working Paper 17633). Cambridge, MA: National Bureau of Economic Research.)

² Heckman, J.J. & LaFontaine, P. A. (2007). *The American high school graduation rate: Trends and levels* (NBER Working Paper No. 13670). Retrieved from National Bureau of Economic Research website: <http://www.nber.org/papers/w13670>.

³ Aud, S., Hussar, W., Kena, G., Bianco, K., Frohlich, L., Kemp, J., & Tahan, K. (2011). *The condition of education 2011* (NCES 2011-033). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

⁴ Bowen, W.G., Chingos, M.M., & McPherson, M. (2009). *Crossing the finish line: Completing college at America's public universities*. Princeton, NJ: Princeton University Press. Roderick, M., Nagaoka, J. Coca, V., & Moeller, E. (2009). *From high school to the future: Making hard work pay off: The road to college for students in CPS's academically advanced programs*. Chicago, IL: Consortium for Chicago Schools Research. Rosenbaum, J. (2001). *Beyond college for all: Career paths for the forgotten half*. New York, NY: Russell Sage Foundation. Schneider, B., & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. New Haven, CT: Yale University Press.

⁵ Harris, D.N. (2013). Applying cost-effectiveness analysis in higher education. In A. Kelly and K. Carey (eds.). *Stretching the Higher Education Dollar*. (pp. 45-66). Washington, DC: American Enterprise Institute.

Upward Bound: Revisited

Upward Bound (UB) is the only federal access program for which we have anything approaching rigorous evidence, so naturally the results of this single, large experiment have received considerable attention. The federally sponsored experiment, first launched in the early 1990s and lasting almost two decades, was intended to estimate effects on a nationally representative sample of 67 UB sites. Students were offered UB at random so that the results estimates would reflect only the offer to participate in UB and not other differences in student characteristics.

The original evaluator concluded that UB had “no detectable effect” on college entry or completion⁶, a conclusion that has since been widely cited as an argument for defunding or revamping the program.⁷ An advocacy group, the Council on Opportunity in Education (COE) has been critical of the study⁸, although there have been no prior attempts to objectively address their concerns. My analysis with Dr. Alan Nathan considers the COE and other critiques based on typical research standards.⁹

Our conclusions differ from both the original evaluator, as well as COE. Due partly to the design of the experiment, the conclusions are very sensitive to seemingly small changes in the way the estimates are made. In particular, in the sampling design, one of the 67 sites contributed only three percent of the student observations but was given 26 percent of the weight when estimating impacts. Put differently, the students in this one site counted more than eight times as much as most of the others. Some individual students in some estimates were given 80 times as much weight as others. This is highly unusual and opens the possibility that this one site could drive the results of the entire study. It also makes it less likely that any estimate will reach typical standards of statistical confidence.

The site in question also appears to have been placed in the wrong category or “stratum,” so that it was given more weight than it should have been. This compounded the earlier problem, further calling into question whether the large weight attached to this one site could be justified. The contractor team recognized these problems and, at the request of the U.S. Department of Education, appropriately carried out additional analyses with alternative sampling weights. The results became noticeably more positive when the sampling weights were handled in different reasonable ways.

While driven partly by the above issues with the design of the experiment, it is not unusual for results to be sensitive in this way. In such cases, it is generally considered good practice to be cautious in drawing conclusions. Yet, the contractor’s final report concluded, in bold letters, that UB had “no detectable effects” on high school graduation, college enrollment, or college graduation.¹⁰ Given that the conclusion is nearly the opposite when other reasonable methods are used, I believe a more appropriate conclusion is that the results are indeterminate; that is, it is not possible to determine whether the program worked on average based on the usual standards of significance.

⁶ Seftor, N. S., Mamun, A., and Schirm, A. (2009). *The Impacts of Regular Upward Bound on Postsecondary Outcomes Seven to Nine years After Scheduled High School Graduation. Final report.* US Department of Education.

⁷ Field, K. (2007). Are the Right Students 'Upward Bound?'. *Chronicle of Higher Education* 53(50), 16-16. Haskins, R. & Rouse, C. (2013). Time for Change: A New Federal Strategy to Prepare Disadvantaged Students for College. *The Future of Children*, 2, 1-6.

⁸ Cahalan, M. W. (2009). *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?* Council for Opportunity in Education: Washington, DC.

⁹ Harris, D.N. & Nathan, A. (2013). *The Effects, Benefits, and Costs of the Upward Bound College Access Program: Evidence from a National Randomized Trial.* Presentation at the annual meeting of the Society for Research on Educational Effectiveness, Washington, DC.

¹⁰ Seftor et al. (2009), Ibid.

But there is still much to learn from this experiment about targeting, costs, and benefits. Based on what UB site administrators say about the eligibility criteria, it appears that hundreds of students participated in the experiment who would typically have been screened out for having too many behavioral and academic challenges. For example, a national survey of UB site directors conducted in the 1990's reported 62 percent of respondents disqualified applicants with a history of behavioral problems or a record of disciplinary actions, while 47 percent of responding administrators disqualified students who had no specific interest in college. Since students enter UB early in high school, when students know little about college, there is little reason to expect that these would be good indicators of whether students would benefit from UB.

The fact that these additional students were included is useful because it presents an opportunity to learn which types of students benefit most from UB. While almost none of the students in UB would ever be considered “advantaged,” there is great variety in the needs of low-income and first-generation students and some of them are already doing relatively well by the time they get to high school. Our results suggest that students with more challenges in fact *benefit much more* than students typically allowed into UB (the precise amount depends on exactly how the students are placed in the typically eligible group). Unlike the earlier discussion of average effects and sampling weights, the larger effects for typically disqualified students are insensitive to methodological choices. This yields convincing evidence that UB, at least as it was designed at the time of the experiment, is poorly targeted.

Finally, we conducted a series of cost-benefit analyses, quantifying the economic benefits of the various high school and college credentials and comparing these with the program costs. Such a comparison is important given that UB is widely considered an expensive program.¹¹ Are these costs justifiable? The answer seems to be clearly “yes.” Unlike the estimates of the average program effects, the benefits easily exceed the costs of the program under almost any set of assumptions, including the most pessimistic estimates of program effects. Importantly, the only condition under which UB may not pass a cost-benefit test is when we limit estimates to students who are typically served. This reinforces the importance of better targeting to students most likely to benefit.

Recommendations

My re-analysis of UB with Dr. Nathan leads to recommendations that are consistent with other trends in observations in my college access research.

Targeting. Current college access programs should be targeted to students who are more disadvantaged. This is not only consistent with the effects of UB, but also with the logic that college access programs are more widely available today, especially in schools serving the socioeconomically disadvantaged students. (We see this especially in Milwaukee Public Schools where most college access programs are not federally funded.) Targeting these programs to first-generation and low-income college students is a good start, but, as our UB analysis shows, many of these students are apparently on track for college without additional federal access programs.

Individualization. In addition to better targeting, services might be more effective if they were more flexible and individualized. Different students have different needs, yet federal college access programs provide a fixed set of services, many of which are mandated by federal rules. If program

¹¹ Harris, D. (2013). Ibid.

administrators could diagnose the needs of each student and individualize service delivery, the programs would likely be more effective. The fact that many services are federally required compounds the problem because site administrators are forced to provide specific services, giving administrators little reason to diagnose individual student needs.

Efficiency. A better return on investment might be achieved by simply finding cheaper ways to address students' needs. UB costs more than \$5,000 per participant per year, while other recent research suggests that similar gains can be had at a fraction of the cost.¹² The traditional services being provided by federal programs may still be warranted for some students, especially those who face the greatest barriers, but if there are more cost-effective ways to help these students, we should pursue them.

Avoiding the Unintended Consequences with Performance Standards. Given the desire for targeting, individualization, and efficiency, it seems reasonable to set goals for programs, provide funding based on results, and let program operators use resources as they see fit to reach those goals as they see fit. As recent efforts in school and college accountability have shown, however, performance requirements are fraught with challenges and the potentially perverse incentives. For example, one reason UB sites might be screening out the most disadvantaged students is that federal funding is partly contingent on their getting a high percentage of students to succeed in college. Paradoxically, these federal incentives may induce program operators to select the students who do not need their services—students who will likely make it to college regardless of whether they are in college access programs. One way to avoid the unintended consequences of performance standards is to send a clearer message to program administrators that they should be targeting not just low-income and first-generation students, but also those with more severe academic and behavioral challenges.

The Need for More Research. I make these recommendations with some caution because the research basis for decisions on federal college access programs is wholly inadequate. Upward Bound is the only federal access program for which we have rigorous evidence and even that, as I have shown, is misunderstood. Perhaps the most important step is to fund additional studies so that these decisions can be better informed.

Conclusions

Given the changing landscape, and recent research on Upward Bound, there can be little doubt that TRIO and GEAR UP are ready for redesign. While the current research base is far from adequate, it appears that targeting existing programs to students with greater disadvantages, diagnosing and individualizing services, looking to more efficient service options, and avoiding the unintended consequences of performance incentives would all help to maintain these programs as core components of the nation's efforts to increase college access and success.

¹² Castleman, B.L., & Page, L.C. (2013). *Summer Nudging: Can Text Messages and Peer Mentor Outreach Increase College Going Among Low-Income High School Graduates?* Paper presented at the Society for Research on Educational Effectiveness Spring Conference. Washington, D.C. Bettinger, E. & Baker, R. (2011). *The Effects of Student Coaching: An Evaluation of a Randomized Experiment in Student Advising.* Unpublished manuscript. Stanford University School of Education, Palo, Alto, CA. Hoxby, C. & Turner, S. (2013). *Expanding College Opportunities for High-Achieving, Low Income Students.* Stanford Institute for Economic Policy Research. Palo Alto, CA.