Introduction

The U.S. Department of Education (Department) is committed to continually improving its management of programs and improving the educational outcomes of students. One tool for program improvement is providing program performance data to grantees, key stakeholders and the public in a way that encourages reflection, action and collaboration. These analyses provide performance and efficiency measure results for the regular Upward Bound (UB) and Upward Bound Math-Science (UBMS) projects. The Department uses the postsecondary school enrollment rate of participants as its measure of performance and the difference between the annual cost per successful participant and the annual cost per participant as its efficiency measure. A successful participant stays in high school or enrolls in postsecondary education.

Selected Findings

Based on the postsecondary enrollment rates of UB and UBMS participants expected to graduate from high school in 2003–04 and 2004–05 (calculation methodology in Appendix A), the 2005–06 efficiency measure (calculation methodology in Appendix B), and grantee institution characteristics (data sources in Appendix C), the following was found:

- Postsecondary enrollment rates for both UB and UBMS programs exceeded Department goals for students expected to graduate from high school in 2003–04 (UB, 73.3 percent and UBMS, 82.9 percent), and were higher still for those expected to graduate in 2004–05 (UB, 77.2 percent and UBMS, 86.5 percent) (table 1). The Department’s postsecondary enrollment rate goal overall for both programs in those years was 65 percent (http://www.ed.gov/about/reports/annual/2009plan/g2triouward.doc).
- Postsecondary enrollment rates increased, on average, over the same period for UB projects sponsored by two-year postsecondary institutions (2.8 percentage-point increase) and four-year institutions (4.3 percentage-point increase), as well as for UBMS projects sponsored by four-year postsecondary institutions (3.7 percentage-point increase) (table 1).

- Nearly three-quarters of all regular UB projects had 2005–06 postsecondary enrollment rates of 70 percent or higher (figure 1a); approximately 76 percent of UBMS projects had postsecondary enrollment rates of 80 percent or higher (figure 1b).
- In regular UB, participants who stayed in the program for a longer period of time tended to have higher postsecondary enrollment rates, as is clear from figure 2.

1 The results of paired-sample t-tests were statistically significant at the 0.01 level. The results for UBMS projects at two-year institutions were not statistically significant at the 0.05 level.
Ninety-one percent of participants expected to graduate in 2004–05 who were enrolled in a UB project for 36 months or more enrolled in postsecondary education, compared to 54.8 percent of participants who were enrolled in a UB project less than 12 months.²

- The role of length of program participation is not statistically significant in UBMS. The difference is presumably due to inherent differences between the UB and UBMS programs. Some UBMS projects operate as regional centers that typically serve students for only one or two summer sessions; also, the percentage of UBMS students entering the program as freshmen is smaller than that of regular UB. Thus, for many UBMS projects, program participation for 36 months or more may not be a useful comparison.

- Participants expected to graduate from high school in 2004–05 at projects sponsored by four-year institutions were significantly more likely to enroll in a four-year postsecondary institution (66.0 percent for UB and 72.2 percent for UBMS) than were students who participated in UB or UBMS projects sponsored by a two-year institution (39.6 percent for UB and 54.1 percent for UBMS) (table 1).³⁴

- Of every 100 students expected to graduate from high school in 2004–05 who participated in UB at a four-year institution 45 (54 for UBMS projects) more attended a four-year institution than a two-year institution, on average (table 1).⁵

- For grants serving the expected numbers of students relative to their grant awards, resulting in costs per participant below $5,000, a high percentage of the students are successful (94.8 percent for UB and 96.8 percent for UBMS⁶), resulting in high efficiency—a small difference in the costs per participant and costs per successful participant ($220 for UB and $131 for UBMS⁷) (table 2).

Limitations of Data and Findings

The limitations of the data set used for this analysis (grantee-submitted annual performance reports and the Department’s Integrated Postsecondary Education Data System) do not permit us to determine project impacts, such as the extent to which the postsecondary enrollment rate can be attributed to participation in UB.

Postsecondary enrollment

Because we do not fully understand the role of the various factors that may affect postsecondary enrollment rates in individual projects, the data should be interpreted with

² The result of a paired-sample t-test was statistically significant at the 0.01 level.
³ The likelihood of attending a two- or four-year institution after participating in a project sponsored by a community organization cannot be determined or compared to the likelihood after participating in a project sponsored by a two- or four-year institution because of the relatively small number of projects at community organizations.
⁴ The results of one-way ANOVA analyses were statistically significant at the 0.01 level.
⁵ The results of paired-sample t-tests were statistically significant at the 0.01 level.
⁶ The result of the independent samples t-test assuming unequal variance was statistically significant at the 0.01 level.
⁷ The result of the independent samples t-test assuming unequal variance was statistically significant at the 0.01 level.
caution; comparing rates among specific projects could lead to unwarranted conclusions. For example, a project may have a lower than average postsecondary enrollment rate because the project may be serving more students with a high risk of academic failure, who have low educational aspirations, and/or who are in low-performing high schools.

Four important data issues that also could significantly affect outcomes are these:

- For some projects, only a small number of students were expected to graduate in 2004–05 or 2003–04. Where only a small number of graduates exist, small changes in numbers can cause significant changes in percentages. For example, a grantee that expects five students to graduate in 2005 will have an enrollment rate of 100 percent if all enroll in postsecondary education, but a rate of only 80 percent if just one student does not matriculate.
- A couple of projects did not submit complete data on all students served by the project, resulting in no students included in the number of expected high school graduates for 2004–05.
- Some projects experienced difficulty in following up with prior participants and thus may have been unaware of enrollments that did, in fact, occur.
- Additional years of data could significantly change the picture.

**Efficiency Measure**

The efficiency gap figures should be viewed cautiously, because in some cases they may be misleading. A project might have a gap of $0, which suggests that a project is working efficiently, but the project may have some significant problems. For example, the project might serve fewer students than it was funded to serve, resulting in an undesirably high cost per participant. But if all those participants persisted in secondary education or enrolled in postsecondary education, then all those participants would be successful, and the cost per successful participant would equal the cost per participant. As a result, the gap for that project would be $0 even though it had failed to serve the number of students intended. In other cases, projects serving a high percentage of students at high risk for academic failure often have lower percentages of successful participants. In sum, all the data should be interpreted with caution; comparing rates among projects could lead to flawed conclusions.

Given the possibility of such misinterpretation, it is important to consider the efficiency measure in the context of the other columns in the table, particularly those on percentage of successful participants, cost per participant, and cost per successful participant.

Regarding the cost per participant, 31 projects with costs in the high range of $5,500 or more: (1) did not meet their number of participants funded to serve, resulting in a high cost per participant (marked with an asterisk in table 2); (2) had high costs approved by the Department at the outset of their grants because of special circumstances of the project (marked with a double asterisk in table 2); or (3) apparently had data errors or missing data leading to a high apparent cost per participant (marked with a double asterisk in table 2).