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Overcoming Obstacles to Preparing for College: Perspectives from a Rural Upward Bound Program

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This research study examines the major obstacles low-income rural youth face in preparing to attend college and how to overcome these obstacles through the participation in an Upward Bound program. The data for this study are from a single-site of the regular ("Classic") Upward Bound program at a public university in a rural New England state and include surveys and interviews with students, guidance counselors, and parents and/or guardians of Upward Bound students. The results of this study indicated that there are two primary barriers that low-income rural students face in preparing for college: financial and social. Students and parents considered applying to the program not only for academic reasons but also for financial and social reasons. Once enrolled in the program, rural students began to benefit academically, financially, and socially. The retention rate at this public university is significantly higher than the national retention rate reported by Mathematica Policy Research, Inc. Several recommendations for practice for rural Upward Bound programs and high schools serving rural Upward Bound-eligible students are included.

Introduction

Upward Bound is a federally-funded program, which prepares high school students from low-income families whose parents did not complete a four-year college degree to enter and complete post-secondary education. Upward Bound began in 1965, as part of President Lyndon Johnson's "War on Poverty," and is currently administered through the United States Department of Education. In the federal government's fiscal year 2003, 770 Upward Bound project sites provided 56,324 students with intensive summer programs at four-year or two-year colleges, as well as tutoring and counseling services at their high schools during the academic year (U.S. Department of Education, 2003; Council for Opportunity in Education, 2004). Services typically begin in the 9th or 10th grades, and continue through the completion of high school. Some projects also offer a "bridge" summer program between high school and college. As of 1993, 40% of the target high schools that regular Upward Bound students attended were located outside metropolitan areas. Furthermore, 10% of the target schools enrolled fewer than 300 students, while another 32% enrolled 300-750 students (Moore, Fasciano, Jacobson, Myers, and Waldman, 1997). Hence, assuming no change in the rural-metro distribution of projects, target schools, and students over the past decade, an estimated 22,000 rural high school students from 2,200 rural high schools would now be participating in Upward Bound nationwide each year.

Examining how rural Upward Bound programs help rural youth prepare for college illuminates several critical obstacles for these youth. This article identifies specific obstacles low-income rural youth face in preparing to go on to college, based on the experience of one rural Upward Bound program in Maine. It also offers recommendations for rural education leaders for college preparation of low-

income youth considered to be "first-generation" (defined as "neither of the student's parents has earned a bachelor's degree").

There is good news and bad news in the educational progress of rural youth. In 1993, the United States Bureau of the Census reported that 88.9% of rural youth completed high school, a substantial improvement over the 83.2% completion rate in 1975. By 1993, rural adolescents were as likely as adolescents from metropolitan areas to graduate from high school; whereas in 1975, adolescents in metropolitan area central cities were slightly more likely to graduate from high school than adolescents from rural (non-metropolitan) areas (Paasch and Swaim, 1998). Yet, the 2000 NELS follow-up survey of 8th grade cohort of 1988 showed that 12 years later 89.7% of participants who attended 8th grade in rural areas had graduated from high school or received a General Equivalency Diploma (GED) compared to 92.5% of urban participants and 93.1% of suburban participants (Ingels, Curtin, Kaufmann, Alt, and Chen, 2002).

Research studies of college attendance rates indicate that rural youth are less likely to attend college than youth from metropolitan areas, and that this statistical gap is growing. Herzog and Pittman (1999) reported that the gap between rural and metropolitan areas in the percentage of the population that has completed a bachelor's degree or beyond grew from 3.4% in 1960 to 9.5% in 1990. The National Longitudinal Study of Youth tracked the experiences of 12,000 youth who were aged 14-21 in 1978. By the time these youth were 25 (1982-1989), 25% of youth who had resided in rural areas in 1978 had graduated from a two or four-year college program, compared to 29% of youth who had resided in metropolitan areas. Migration of these youth increased the gap, with only 22% of youth living in rural areas at age 25 having earned a college degree, compared to 30% of youth residing in metropolitan areas at age 25

(Gibbs, 1998). In 2000, according to the NELS follow-up survey, by age 25, 23.9% of participants who lived in rural areas when they attended 8th grade had a four-year college degree by 2000, compared to 25.5% of urban participants and 35.2% of suburban participants (Ingels, et al., 2002). Schmuck and Schmuck (1992) argued, "Too often, because of the economic despair in many small towns, school is seen as the way either to prepare students to leave their community for employment somewhere else or to remain in their own town only to live on the fringes of society" (p. 27). For those who chose the former option, postsecondary education may be the first stop on the road out of rural life.

For those students who wish to remain or return to live in rural communities, secondary education is essential for future employment opportunities and for the chance to pursue postsecondary education. Specifically, the curriculum in rural schools is at the heart of a quality rural education. Schmuck and Schmuck (1992) described small-town school curriculum:

Most districts rely heavily upon the materials designed for urban and suburban populations that dominate commercial publishing and have little meaning for life in rural and small-town America. The curriculum must give students a sense of options about their adult lives. The best curriculum, we think, equips students to live successful, complete lives in their own community or in an urban community. Small-town schools seem to do neither; they do not provide students with skills to manage their lives successfully in other communities, nor do they provide options for students to engage as productive persons in the development of their own communities (p. 26-27).

Living in rural communities creates certain challenges for youth. According to Hektner (1995), "Rural adolescents, especially males, are more likely to experience conflicting aspirations than their urban and suburban peers" (p.11). Specifically, rural youth are more likely to experience a conflict between deciding whether to stay in the community in which they grew up or move out of that community to pursue a college education or seek employment. Rural males are also more likely to wait a year or more before deciding what to do with their lives after high school. Males living in rural communities are less likely to aspire to and pursue a college education than rural females.

Research has demonstrated that, regardless of such other factors as income and race, "first-generation" youth (those whose parents have not completed a bachelor's degree) are likely to face certain obstacles to college access that youth whose parents have completed college are unlikely to encounter. First-generation youth are likely to have limited access to information about college experience, either first-hand or from relatives (Willett, 1989). York-Anderson and

Bowman (1991) stated that first-generation students were likely to perceive less support from their families for attending college. In addition, first-generation students may find themselves "on the margin of two cultures" and must often negotiate relationships at college and at home to manage the tension between the two (London, 1992). Finally, Terenzini (1996) found that first-generation youth have been less likely to encounter a welcoming environment on college campuses.

Poverty is the primary factor correlated with high school completion rates, as well as college attendance and completion rates. According to data from the National Educational Longitudinal Study of 1988 (NELS: 88), adolescents from low-income families and from families in which the parents did not complete high school are less likely to complete high school themselves (Paasch and Swaim, 1998). In the 2000 follow-up study of NELS: 88, 76.5% of participants in the lowest income quartile had completed high school or a GED compared to 95.7% in the two middle quartiles and 98.8% in the top quartile. The United States Bureau of the Census (2001) reported very large differences in college attendance and completion based on family income. In 2000, of youth ages 18-24 in families with incomes below \$20,000, only 21.11% of males and 23.69% of females were either enrolled in post-secondary education or had earned a bachelor's degree. By contrast, in families with incomes exceeding \$75,000, 59.10% of males and 70.94% of females, ages 18-24, were attending post-secondary institutions, or had completed a bachelor's degree.

Rural adolescents were more likely to live in families whose incomes fell below the poverty line, and to have parents who did not complete high school, than adolescents in metropolitan areas, based on data from the 1990 United States Census (Paasch and Swaim, 1998). Furthermore, the NELS: 88/2000 study reported that only 7.3% of participants in the lower socioeconomic quartile had completed a four-year college degree; compared to, 24.0% in the two middle quartiles and 59.6% in the top quartile. While lower family incomes in rural areas may be the greatest obstacle rural adolescents face in going to college, other factors include the greater distance rural students must travel to get to college and the lower percentage of rural adults who are college educated and thus potential role models. Rural versus metropolitan area residence does not influence college attendance for children of college educated parents with high grade point averages in high school. However, rural adolescents with average grades and parents who have not attended college attend college at a rate that is below that of comparable adolescents from metropolitan areas (Gibbs, 1998).

Upward Bound has been shown to positively impact college attendance rates in Maine, the state where this study was conducted. Maine is a predominantly rural state with only one city (Portland, population: 64,000) of over 50,000 people. McIntire (1994a; 1994b) surveyed guidance counselors regarding college attendance for Upward Bound students who graduated from high school the previous spring, compared to a random sample of other graduates from the same high schools that year. There were four

Upward Bound sites in Maine, serving students from a total of 78 high schools, all of which participated in the study and almost all of which were located in rural areas. That fall, 75.5% of all Upward Bound graduates entered four-year colleges, and an additional 5.3% entered two-year colleges. For the Upward Bound site where this study was conducted, the four-year college attendance rate was 82.4%, and for two-year colleges was 5.9%. For the random sample of all other high school students (including some with middle to high incomes), the attendance rate at four-year colleges was 40.4%, and at two-year colleges, 15.1%. For the random sample's sub-group of low-income students whose parents had not completed a four-year college degree, the four-year college attendance rate was 25.2%, and at two-year colleges 14.8%. Thus, Upward Bound graduates were almost twice as likely as graduates in a random sample of their peers to attend four-year colleges, and three times as likely to attend four-year colleges as their peers from comparable family backgrounds (McIntire, 1994 a, 1994 b)

Purpose of Study

Given the demonstrated success of Upward Bound in Maine in preparing eligible rural high school students for college, the purpose of this study was to gain a better understanding of what the obstacles low-income rural youth face in preparing to attend college and how participation in an Upward Bound program helps students to overcome these obstacles. The Upward Bound program offers rural students an opportunity to overcome obstacles to a college education, allowing the dream of a lifetime for many rural youth to become a reality.

This article addresses four major research questions: (1) What are the obstacles to getting a college education? (2) What are the incentives to change; i.e., why go to college? (3) What is the Upward Bound program doing to promote the change; i.e., what are the benefits of the program? and (4) How successful is the Upward Bound program in supporting students?

Surprisingly, considering that Upward Bound has been in existence for 37 years and has served many thousands of students, there is limited research available on Upward Bound. The United States Department of Education has funded two major program evaluations of Upward Bound. Most recently, the United States Department of Education contracted with Mathematica Policy Research Inc. to conduct the National Evaluation of Upward Bound, which began in 1992 and is still ongoing. For Phase I of the National Evaluation (1992-1997), Mathematica Policy Research Inc. gathered baseline data on a national sample of regular Upward Bound projects, students and target high schools. Phase II continues the research on the students who participated in Phase I as they advance through their college years, and has added an evaluation of the Regional Math/Science Centers.

Nowhere in the Mathematica Report is there information on rural youth specifically. The final report of Phase I indicated that program impact could be shown for some groups of students, but not for others. What Mathematica does report on is the following:

1. students with lower expectations benefited more than those with higher expectations,
2. low-income/first-generation students showed larger impacts than those who qualified only for the program as first-generation students, and
3. poorer performing students benefited more than better performing students (Myers & Schirm, 1999).

We believe the Mathematica Report does not help educational leaders to understand rural youth in general and the major obstacles they face in preparing to go to college specifically. Rural leaders ought to understand the specific barriers low-income rural youth face and how to overcome them, so rural students may have the opportunity to pursue and complete a college education.

Methodology

The data for this research study were collected via surveys and interviews of students, guidance counselors, and parents or guardians of students. The surveys and interviews explored issues related to recruitment and retention as well as program impacts of the Upward Bound program at the University of Maine. We used the ecology of human development model (Bronfenbrenner, 1979, 1993) as a guide in developing our research questions and data collection instruments. Survey data were analyzed using descriptive statistics.

This study has three data collection phases. The first phase involved Upward Bound students participating in the summer program during the months of July and August 1999. A survey was administered to all students who consented to do so and who had parental permission (for the large majority who were under the age of 18). Fifty-three (39 females and 14 males) of ninety-nine students in the regular program (53.5%) completed and returned the survey. Nine randomly selected students were interviewed in person, either individually or in small focus groups of two to three students. These students had just completed their sophomore, junior, or senior years of high school. The surveys were administered in the third week and interviews were conducted in the fourth and fifth weeks of the summer program.

The second phase of the study was completed in the fall 2000. Surveys were hand-delivered by Upward Bound staff to the guidance counselors at the student's participating high schools, and all fourteen were returned to the principal investigator. In addition, seven guidance counselors agreed to be interviewed by telephone, and two agreed to an in-person interview.

The third and final phase of the study was completed in the fall of 2001 with the parents and/or guardians of regular Upward Bound students in the 2001 summer program. Thirty-seven (37) surveys (37% response rate) were returned from parents of regular Upward Bound students, of whom 27 were female students and 10 were male students. Additionally, interviews were conducted with 15 parents of regular Upward Bound students (9 female students and 6 male students).

Data Sources

The data for this paper are from a single-site study of the regular ("Classic") Upward Bound program at a public university in a rural northeastern state. This university offers both the regular Upward Bound program and an Upward Bound Regional Math/Science Center. The regular program has served students from small, rural high schools in a four-county area since the 1960's. Currently, the regular program serves about 120 students from 14 high schools, five of which have fewer than 300 students, while eight have 300-750 students, and only one of which has over 750 students (and serves eight rural towns). The mean enrollment at these high schools is 350 students. The target high schools were deliberately chosen based on their high percentages of eligible students, and their distances from any urban center. These high schools are 20-80 miles from the small city that serves as the commercial center of the region, as well as from the adjacent town, which is home to the university and its outreach services for public schools. At this institution, about 92% of the regular Upward Bound students are white, 8% are minorities, and about 68% of the students are females.

The Regional Math/Science Center at this university serves about 50 students from several states. While about half of the Math/Science students are from rural high schools, the other half are from cities, and all of these urban students are members of ethnic minorities (Black, Asian or Latino). Two-thirds of the Math/science students are female. Nationally, almost three-fifths (3/5) of all Upward Bound students are African-American, while one-fifth (1/5) of the students are white and one-eighth (1/8) of the students are Latino. About 60% of participants nationally are females (Moore, et al. 1997).

The regular Upward Bound program at this site requires students to participate in an intensive six-week summer program held on campus, as well as in bi-weekly activities at their respective high schools during the academic year. During the summer, the regular Upward Bound students engage in three intensive 75-minute classes each weekday morning and have a paid part-time job each weekday afternoon, usually off campus. The day program for Math/Science students is separate and different. However, regular Upward Bound students participate with students in the site's Regional Math/Science Center in evening activities, including study hall, career development, sports, and other recreational activities. Students in the regular program and in Math/Science live and dine together in a residence hall and dining commons on the university campus. For six weeks, the Upward Bound student learns what it is like to be a college student on a college campus acquiring academic and social skills necessary for college life.

During the school year, Upward Bound counselors from the university meet with regular Upward Bound students and their high school guidance counselors twice a month to provide academic support, which may include tutoring, stress management and career counseling on an as-needed basis. In addition, the Upward Bound staff coordinates college visits for seniors and twice-yearly reunions on

campus. The staff also provides assistance with completing the necessary forms such as admission and financial aid applications, which are at no cost the student, since all fees are paid for by the Upward Bound program.

Research Findings

Obstacles rural youth face in preparing for college

There are two primary obstacles that low-income rural students face in preparing for college, as reported by students and guidance counselors: financial and social. The costs of pursuing an opportunity like Upward Bound are high for any student who has the chance for lucrative summer employment in his or her home community. Both students and guidance counselors indicated that some students do not apply to the Upward Bound program because they have the opportunity to earn more money while at home. From the surveys, 52.9% of guidance counselors indicated that eligible female students do not apply because they can earn more money at home; 76.5% of guidance counselors reported that males do not apply for the same reason. Interviews with guidance counselors revealed that although the Upward Bound student has a part-time job in the afternoon for six weeks while they are on campus, many of these students could earn more money, working longer hours, if they decided not to participate in the program. Furthermore, 26.4% of participating Upward Bound students indicated that one of their reservations about applying for Upward Bound was that they could earn more money if they stayed home.

This study found that this was especially true for males who live in coastal communities. In interviews, high school guidance counselors reported that males who reside in coastal communities might not enroll in the program because many have the opportunity to work on lobster boats, where they may earn up to \$20,000 during a summer. For some students from low-income families, this summer work opportunity may be quite difficult to pass up. Males who reside in these communities typically hold these jobs. Females in these communities are typically employed in wait staff positions in restaurants or childcare jobs that pay less.

The second major obstacle to preparing for college by participating in Upward Bound is social. Over 45% of guidance counselors indicated that being away from home, family, friends and significant others was a concern for both males and females. Students, both males and females, stated that the length of the summer program was something that made them reluctant to apply. Leaving their families and significant others behind was much more of an issue for females than for males. The guidance counselors believe that some of the students who decided not to apply to the program did so because they fear the unfamiliar surroundings of a large university. They have decided that they would rather maintain relationships with friends, significant others, family members, and others who are not involved in the program. Some students felt the social pressure from family and friends to drop out of the Upward Bound program before completion. During the interviews,

some students indicated that the idea of being away for six weeks (even with most weekends back home) was terrifying, especially if the student had never been away from his or her small rural community. Parents echoed similar reasons: being away from family (54.1%) and being too far from home (24.3%) as concerns for their children in applying to the Upward Bound program.

Incentives to attend college

Students and their parents considered applying for the Upward Bound program for several reasons. These incentives can be classified into three categories: academic, financial, and social. The majority of the Upward Bound students (90.6%) indicated that they decided to apply for the Upward Bound program because the program had prepared them for getting into college. In addition, 71.7% of the students surveyed responded that the program would help them improve their high school grades. About two-thirds (66.0%) of the Upward Bound students surveyed felt that the program helped them explore career opportunities, and the same proportion reported that they liked being on a college campus. Guidance counselors perceived academic reasons as the primary motivation for entering Upward Bound. When asked why students apply to Upward Bound, 100% of the guidance counselors said getting into college was a common reason for males, and 82.4% gave the same reason for females. In addition, 76.5% cited improving high school grades as a reason for males, while 64.7% gave that reason for females. Moreover, 64.7% cited being on a college campus as a reason for both males and females. When we asked why their child should apply to Upward Bound, parents also pointed to academic reasons: helped them get into college (97.3%), gave them an opportunity to explore careers (64.9%), improved high school grades (56.8%), and spent time on a college campus (40.5%).

The second major incentive that directly influenced who applied to the program was financial. Results of this study showed that 83.0% of the students indicated that having a summer job and money was a reason they decided to apply to the program; whereas, 66.0% wanted to gain work experience. Interestingly, financial reasons were cited less frequently by guidance counselors, with only 29.4% citing having a job and earning money as a motivation for males, and only 23.5% giving the same reason for females. Guidance counselors also less frequently cited work experience, at 35.3% for males and 17.6% for females. The majority of the parents (62.2%) in this study stated their sons and daughters gained work and research experience; whereas, 29.7% felt that their children should have a summer job and earn money as a main reason for applying to the program.

The third major incentive to participate in the program was for social reasons, which were also cited more frequently by students than by their guidance counselors. Examples of social reasons included: met people of other racial/ethnic groups, enjoyed meeting other students on campus, and knew someone who would be there on campus. These specific reasons were cited by female students in the range of 41.0% to 69.2%, and by males in the range of

14.2% to 42.9%. Guidance counselors cited these reasons at 23.5 to 29.4% for males, and 23.5% to 41.2% for females. Parents cited these identical reasons in the range of 8.1% to 32.4%.

How Upward Bound program benefits low-income rural students

Once students enrolled in the program, they began to directly experience how the Upward Bound program benefited them. These students perceived that they benefited academically, financially, and socially. The three major academic reasons rural students liked the program were the following: helped him/her get into college (94.3%), improved his/her high school grades (75.4%), and he/she liked being on a college campus (73.5%). The parents also reported similar findings. Eighty-six percent (86%) of them felt that the help getting into college was the advantage for their son or daughter to return and participate in Upward Bound for at least another summer.

Virtually all of the regular Upward Bound program students (90.5%) indicated that the Upward Bound program provided them with summer employment and income. The majority of high school guidance counselors reported that rural students in the program anticipate the summer income they would make while in the program. Parents, on the other hand, were not as concerned as were students in the program with regard to financial gains of participating in Upward Bound. Only 41.7% of the parents in this study stated that summer income and employment was a real issue for their son or daughter.

Another influential aspect of the Upward Bound program in promoting the change in rural students was social. Students indicated that they liked meeting people who are unlike them (86.7%), liked meeting other students (84.8%), believed that the Upward Bound staff are supportive (75.5%), and knew someone who would be there (73.6%). Most high school guidance counselors believed that once these young students got to know other students on the university campus, they began to develop deep friendships and wanted to return to the program because of the strong peer connections they had formed while attending the program. Many parents in this study felt that Upward Bound had a positive affect on their children, which added to their social development. They indicated that their son or daughter had made more friends while in the program; which in turn, made them better prepared for college socially.

How Upward Bound supported students

Upward Bound in Maine is highly successful at getting student to attend college, as described above (McIntire, 1994a, 1994b). In addition, at the site where this study was conducted, the program's retention rate (students admitted to the program remaining active in the program through the end of high school) is significantly higher than the nationwide Upward Bound retention rate reported by Mathematica Policy Research, Inc. Approximately 84.0% of sophomores recruited and admitted into the regular

Upward Bound program at the study site in 1998-1999 remained in the program through high school graduation. In contrast, Mathematica Policy Research, Inc. reported retention in regular Upward Bound projects of no more than 45% (Myers & Schirm, 1999).

We asked the students: "Overall, do you feel Upward Bound has lived up to your expectations?" We found 40.0% said, "yes" to this question; whereas, 58.0% stated they felt "somewhat" satisfied with the program. Only one student (2.0%) out of 53 students felt dissatisfied with the program. Overall, the majority of the students felt either satisfied or somewhat satisfied with the Upward Bound program at this university. Interestingly, 63.0% of the students who had one year of program eligibility remaining stated they planned to return to Upward Bound the following summer. Thirty-one percent (31.0%) of the students were undecided and only 6.0% said they would not return to participate in the program.

Implications for Practice

Clearly, there are special problems with getting low-income, first-generation rural youth into college. The Upward Bound Program benefits low-income rural students through (a) improvements in academics, (b) higher goals and aspirations, (c) increased access to information about potential careers, colleges/universities and the financial aid process, and (d) increased self-esteem, confidence, and maturation. Based on this study and its research findings, seven recommendations for rural Upward Bound programs and high schools serving rural Upward Bound-eligible students seem justified.

1. *The Upward Bound program must target the areas of greatest need.* Upward Bound projects across the country must make special efforts to serve students in isolated and depressed rural areas, where the chances of entering and completing college are reduced by high rates of poverty, distance to the nearest college, lack of role models, and other factors. Upward Bound staff and other professionals who work with rural youth need to take responsibility for addressing the obstacles that exist in rural communities. Eligible students in such areas are the most likely to benefit from Upward Bound and similar services.

2. *Upward Bound projects, as well as participating high schools, must be attentive to the economic development opportunities in rural areas,* and must encourage students in rural communities to pursue higher educational opportunities that will prepare them to work in and contribute to the communities in which they live. For instance, a globally competitive market for paper products and the declining fish stocks are forcing rural people, including the youth, in north woods and coastal communities to seek employment elsewhere. Thus, the first step in addressing the issue of economic development opportunities in any rural community is to recognize the local obstacles in one's own neighborhood. If a rural youth decides to remain

in his or her community, he or she will need to be prepared for the future. The curriculum of both Upward Bound projects and rural high schools ought to include content that is appropriate in preparing them for future local rural employment opportunities. It is imperative that rural school leaders find ways to improve the small town rural curriculum to build upon those skills needed to work in rural communities. High school teachers and guidance counselors can be instrumental in that task by counseling students to take appropriate academic and vocational course work and, as a result, students could utilize their newly learned skills to benefit themselves and the communities in which they reside.

3. *The opportunity costs of participating in Upward Bound are high for any students* who have opportunities for summer employment in their home communities during their high school years. The short-term goals should not only be rewarding financially but also personally. Career exploration and exposure to work experience could be made available through various means: a paid vocational technical career preparation program; local businesses providing paid internships; or federally-funded programs that allow students to work in local rural businesses. The long-term goals must include teachers and counselors encouraging students to accept such a cost: preparing to enter and succeed in college, obtaining a higher financial reward; i.e., getting a good paying job, and acquiring non-monetary related satisfaction, such as high self-esteem for accomplishing a personal and academic goal.

4. *Campus tours for prospective Upward Bound students could increase students' comfort level* with the idea of spending summer on campus, and would thereby diminish the anxiety level about attending college. High schools must provide rural students with a variety of exposures to colleges and universities regardless of whether an Upward Bound program exists in their rural town. High schools must also provide students with the resources to learn more about postsecondary educational opportunities.

5. *Caring teachers, guidance counselors and rural school and community leaders play a crucial role in helping students to overcome the obstacles* they may face in preparing for college. Teachers and guidance counselors should have current understanding, preferably first-hand experience, about colleges and universities. Anything that promotes guidance counselors', teachers', and rural leaders' understanding of the Upward Bound program and/or other similar programs would be particularly beneficial to low-income rural students. By providing the right kind of direction, these students can become competent, successful young adults with high self-esteem and hope for the future.

6. The social costs of participating in the Upward Bound program are also vital to rural students and communities. The strong social connections that are usually found in rural communities matter a great deal to students, teachers, and parents. In addition, the Upward Bound and high school staff should work in concert with low-income students to establish a personal relationship in helping the students' triumph over the obstacles they may find difficult to deal with at this critical juncture in their lives.

7. Because of funding limitations, many rural Upward Bound-eligible students are not served by Upward Bound sites. To the extent that high schools could learn what Upward Bound does, and provide similar services, perhaps with support from their local communities, their states, and/or the federal government, more students could and should be served. In addition, many other students who do not meet the eligibility criteria certainly could benefit from such services as well. Additional federal funding and/or state funding for Upward Bound or equivalent services would benefit countless rural students.

Conclusion

Despite obstacles to college access related to personal and family income, family educational background, place of residence and other issues, high school students in the federally-funded Upward Bound programs in rural Maine have gone on to college in far greater numbers than similarly situated peers. The success of Upward Bound programs in Maine in preparing students for college can be attributed to several aspects of the programs, which could be replicated elsewhere. Furthermore, at least some aspects of the Upward Bound program could be adopted by high schools with the support of their communities and states, with or without federal support.

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