2000

Promoting College Enrollment Through Early Intervention

Laura W. Perna
University of Pennsylvania, lperna@gse.upenn.edu

Follow this and additional works at: http://repository.upenn.edu/gse_pubs

Part of the Educational Administration and Supervision Commons, Educational Assessment, Evaluation, and Research Commons, Education Economics Commons, and the Higher Education Commons

Recommended Citation

This paper is posted at ScholarlyCommons. http://repository.upenn.edu/gse_pubs/435
For more information, please contact repository@pobox.upenn.edu.
Promoting College Enrollment Through Early Intervention

Abstract
For more than 30 years, the federal government has focused on increasing the postsecondary educational opportunities for individuals and groups by providing students with financial aid to offset the costs of attendance. Although financial resources are important, policymakers, researchers, and other observers are increasingly concluding that merely making financial aid available to students is not enough to ensure equal educational opportunity for all students, particularly those who are economically and educationally disadvantaged (Gladieux, Astor, and Swail, 1998; Gladieux and Swail, 1998).

This article sets the stage for understanding early intervention by describing the ways in which such programs recognize and respond to the factors that promote college enrollment.

Disciplines
Education | Educational Administration and Supervision | Educational Assessment, Evaluation, and Research | Education Economics | Higher Education

This journal article is available at ScholarlyCommons: http://repository.upenn.edu/gse_pubs/435
re early intervention programs really necessary? This section of "The ERIC Review" describes the ways that early intervention programs help promote college enrollment, reviews the research on program outcomes, and discusses the future of these programs in the context of systemic education reform.

Promoting College Enrollment Through Early Intervention

Laura W. Perna

For more than 30 years, the federal government has focused on increasing postsecondary educational opportunities for individuals and groups by providing students with financial aid to offset the costs of attendance. Although financial resources are important, policymakers, researchers, and other observers are increasingly concluding that merely making financial aid available to students is not enough to ensure equal educational opportunity for all students, particularly those who are economically and educationally disadvantaged (Gladeaux, Astor, and Swail, 1998; Gladeaux and Swail, 1998).

This article sets the stage for understanding early intervention by describing the ways in which such programs recognize and respond to the factors that promote college enrollment.

Predictors of College Enrollment

Not all students are equally likely to consider enrolling in college. Several factors influence the likelihood of enrollment, including socioeconomic status; education aspirations and plans; academic preparation and achievement; parental support and encouragement; encouragement from counselors, teachers, and peers; and knowledge and information about college costs and financial aid.

Socioeconomic Status

Students of higher socioeconomic status—a composite measure that reflects parents’ level of education attainment, parents’ occupational status, and family income—are more likely than other students to plan for postsecondary education and actually enroll in college (Hossler, Braxton, and...
Coopersmith, 1989; Kane, 1994; Kane and Spizman, 1994; Manski and Wise, 1983; Rouse, 1994). As reflected in the figure on this page, research shows that students who come from families with lower incomes are less likely than other students to realize their education plans (Hossler, Schmit, and Vesper, 1999; Perna, 2000a).

The federal government’s traditional approach to increasing college access among low-income students has been to create financial aid programs. Research suggests that financial aid is an important predictor of college enrollment among high school graduates (Catsiapis, 1987) and college applicants (St. John, 1991), regardless of the type of aid—grant, loan, or work-study program (St. John and Noell, 1989). Low-income students and African-American students may be particularly sensitive to the availability of financial aid (Heller, 1998).

Early intervention programs typically serve students of low socioeconomic status. For example, some programs target students who live in public housing or whose family income is below a specific cutoff point, and other programs include financial assistance for college.

Education Aspirations and Plans
Research suggests that education aspirations and plans are important predictors of college enrollment (Hossler, Braxton, and Coopersmith, 1989; Perna, 2000a). Moreover, it appears that the higher the level of education expected, the more likely it is that the aspirations will be realized (Hossler, Schmit, and Vesper, 1999). These aspirations have been found to be influenced by such variables as socioeconomic status, academic achievement, and parental expectations (Hossler, Braxton, and Coopersmith, 1989).

Some researchers (for example, Adelman, 1999) have emphasized that education plans are a much more important predictor of college enrollment than education aspirations. It is important to remember that “plans” reflect a more realistic assessment of future behavior and a scheme for achieving the desired outcome, while “aspirations” reflect outcomes that are desired regardless of how realistic they are (Adelman, 1999). Other researchers (for example, Berkner and Chavez, 1997; Perna, 2000a) have shown that simply aspiring to attend college is not enough to ensure actual college enrollment. The consistency of aspirations also appears to be important, particularly with regard to bachelor’s degree attainment (Adelman, 1999). For example, some research has shown that bachelor’s degree attainment rates are higher for students who consistently report as high school sophomores and seniors that they aspire to complete at least a bachelor’s degree than for those with less consistent aspirations (Adelman, 1999).

Early intervention programs may address the importance of education plans, including the consistency of education aspirations and the ways in which these aspirations are translated into education plans, in various ways. Some early intervention programs encourage students to believe that attending college is possible, and they educate students about the requirements for enrolling and succeeding in college by providing mentors and other role models. Early intervention programs may also sponsor visits to campuses so that students will envision themselves as college students, and they may require participants to engage in college-related activities such as applying for admission and financial aid.

Academic Preparation and Achievement
Academic preparation and achievement are also important predictors of both predisposition toward attending, and actually enrolling in, a college or university (Bishop, 1977; Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Perna, 2000a; St. John, 1991; Hossler, Schmit, and Vesper, 1999).

Research has shown that college enrollment rates are higher among students who participate in academic or college preparatory curricular tracks in high school (Alexander and Eckland, 1974; Alwin and Otto, 1977; Thomas, 1980; Borus and Carpenter, 1984; Hossler,

---

**College Participation Rates by Family Income Quartile for Unmarried 18- to 24-Year-Old High School Graduates, 1970 to 1994**

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Below $22,033</th>
<th>$22,033 to $41,392</th>
<th>$41,393 to $67,881</th>
<th>Above $67,881</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Income figures are 1994 dollars.
Source: Postsecondary Education Opportunity Iowa City, Iowa Thomas G. Markenson, November 1995. Reprinted with permission from the College Board Review. Copyright © 1998 by College Examination Board. All rights reserved.
Who Attends College?

Students are more likely to attend college if they
- Have high levels of socioeconomic status.
- Aspire and plan for higher education.
- Demonstrate academic achievement.

Braxton and Coopersmith, 1989; St. John and Noell, 1989; Jackson, 1991; St. John, 1991; Altonji, 1992; Perna, 2000b). Nonetheless, Adelman (1999) concluded that academic track is an unreliable indicator of the quality and intensity of the high school curriculum because this term masks important variation within this broad category. For example, using the 1980 High School and Beyond study of high school sophomores, Adelman (1999) showed that 37 percent of high school graduates who had participated in an academic curricular track had not completed algebra II, and 33 percent had completed no more than eight credits in core academic subjects. At least part of these differences may be related to differences in the availability of high-quality courses across high schools (Adelman, 1999).

Research has also shown that the quality and intensity of the high school curriculum is among the most important predictors of both college enrollment and degree attainment (Adelman, 1999; Horn, 1997; Perna, 2000b). For example, research has shown that after controlling for other variables, taking at least one advanced mathematics course is associated with a higher probability of enrolling in a four-year college or university among students who are at risk of dropping out of high school (Horn, 1997) and among high school sophomores who report aspiring to earn at least a bachelor’s degree (Perna, 2000b). Controlling for family background, aptitude, and participation in an academic curricular program, Altonji (1992) found that the number of years of postsecondary education completed is associated with each additional year of high school science, math, and foreign language. Adelman (1999) found that the quality and intensity of the high school curriculum was a more important predictor of bachelor’s degree completion than test scores or class rank, particularly for African-American and Latino students. Nonetheless, research also indicates that, on average, low-income students and minorities are less prepared for college than high-income students and white students (see the bar chart on this page).

Early intervention programs may address the role of academic preparation and achievement in the college enrollment process by including preparatory, supplemental, accelerated, or college-level academic courses. Many early intervention programs offer tutoring or remediation in high school courses and activities designed to help students develop study and test-taking skills. Early intervention programs may also provide academic and career counseling to ensure that students are aware of their options and to help them make appropriate curricular choices during high school. Some programs may stimulate higher levels of academic achievement by requiring students to reach a minimum level of

---

Table: Percentage of All 1992 High School Graduates Considered Qualified for College, by Income and Race/Ethnicity

<table>
<thead>
<tr>
<th>Socioeconomic Status</th>
<th>Race/Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (less than $25,000)</td>
<td>53% African American</td>
</tr>
<tr>
<td>Middle ($25,000-$74,999)</td>
<td>68% Hispanic</td>
</tr>
<tr>
<td>High ($75,000 or more)</td>
<td>68% White</td>
</tr>
</tbody>
</table>

Note: Four-year college qualification index developed for the National Center for Education Statistics based on high school GPA, senior class rank, NELS 1992 aptitude test, SAT and ACT scores, and academic course work.

Source: Access to Postsecondary Education for the 1992 High School Graduates (Washington, DC: U.S. Department of Education; National Center for Education Statistics, 1997); 29, Table 15

Reprinted with permission from the College Board Review. Copyright © 1998 by College Examination Board. All rights reserved.

---

Section 1: Understanding Early Intervention
How Can Early Intervention Programs Help Promote College Enrollment?

Early intervention programs can:

- Target students from low-income families—for example, by explaining the availability of financial assistance for college and offering scholarships and/or stipends.
- Help students see that college is a realistic option by providing mentors, encouraging campus visits, and offering support for college-related activities such as taking tests and filling out applications.
- Provide academic enrichment, remediation, tutoring, and/or study skills course work.
- Provide academic and career counseling and access to peers with similar goals.
- Involve parents in program activities to increase their level of knowledge about college and their ability to be supportive of their children.
- Provide families with facts about applying to college, attending college, and paying for college.

academic performance in order to receive financial assistance.

Parental Support and Encouragement

The amount of support and encouragement that parents give to their children influences both the decision to enroll in postsecondary education and actual postsecondary enrollment behavior (Hossler, Braxton, and Coopersmith, 1989; Hossler, Schmit, and Vesper, 1999). Some evidence suggests that parental support and encouragement is the most important predictor of students’ planning to pursue postsecondary education (Hossler, Schmit, and Vesper, 1999). Parental support and encouragement can include parents helping their children with homework, participating in school activities, saving for their children’s postsecondary education, visiting college campuses with their children, or attending workshops on financial aid with their children.

Early intervention programs may increase parents’ capacity to support and encourage their children in planning and preparing for postsecondary education in various ways. Some programs work to educate parents about the advantages of postsecondary education and the availability of financial assistance. Other programs require parents to sign contracts promising that they will provide various types of assistance and will participate in particular program activities.

Encouragement From Counselors, Teachers, and Peers

High school counselors, teachers, and peers may play an important role in defining postsecondary education as an acceptable and viable option for students (Alexandér, Eckland, and Griffin, 1975; Alwin and Otto, 1977; Falsy and Heyes, 1984; McDonough, 1994, 1997; Noffi and others, 1978; Sewell, Haller, and Ohlendorf, 1970; Thomas, 1980). Support from counselors and teachers may shape students’ actual postsecondary education decisions, such as the choice of college to attend (Hossler, Schmit, and Vesper, 1999). To a lesser extent, this support may shape students’ education expectations or predisposition toward college.

Some research on the influence of peers on college enrollment shows that students are more likely to plan to attend college when their friends also plan to enroll in postsecondary education (Hossler, Schmit, and Vesper, 1999). Other evidence suggests that the influence of peers on student achievement may be greater than the influence of parents, particularly with regard to completing homework and getting good grades (Steinberg, 1996).

Early intervention programs may address the role of these “significant others” by identifying program staff and others as role models. Early intervention programs may also ensure that students receive appropriate academic and career counseling from program staff, counselors, and teachers to fully inform students with respect to their postsecondary education options. Some programs recognize the role of peer support in the college enrollment process by targeting services to an entire class.

Knowledge and Information About College Finances

Many studies show that parents and students overestimate college costs and lack accurate information and knowledge about financial aid (McColloch, 1990; Litten, 1991; Kerber and Hartle, 1998). In addition, after controlling for other factors related to college enrollment decisions, some research shows that students are less likely to enroll in college when their parents lack accurate information and knowledge about financial aid (Ekstrom, 1991; Higgins, 1984; Flint, 1993). After controlling for such factors as language spoken at home, parents’ expectations for their children, and whether the parents had another child currently attending college, other research shows that parents with lower incomes and lower levels of education know less about various types of financial aid (Olson and Rosenfeld, 1984).

Early intervention programs may address the need for knowledge and more accurate information by offering workshops, seminars, and other activities designed to inform both students and their parents about college costs, college options, and the availability of financial aid.
Conclusions and Implications

The most commonly stated goal of early intervention programs is to increase college enrollment rates. The early intervention programs that will most effectively achieve this goal are those that include components aimed at addressing the range of factors that influence college enrollment behavior.

References


Does It Work? Research on Early Intervention

Adrianna Kezar

Editor's note: For more information about many of the early intervention programs discussed in this article, see "Early Intervention Resources" on page 32.

Is there any evidence that early intervention programs actually work? And if so, which type of program works best? Can discussing college, visiting a campus, receiving mentoring, and having parents learn more about what it means to go to college actually improve the odds that disadvantaged students will go to college? These are some of the questions this article attempts to answer.

Although early intervention may intuitively sound like a good way to increase college attendance, it is important to test this assumption with research and evaluation. Research and evaluation can also provide information about ways to improve programs.

There are two different types of research conducted on early intervention programs: program evaluation studies and national studies. Program evaluations are more--few programs have been examined, and only the largest TRIO program, Upward Bound, has received much attention. In addition, few national studies have been conducted, but a national study of the Upward Bound program is currently in progress.

Research on early intervention programs has been hindered by several factors, including a lack of funding; the small size of most programs; and program diversity with respect to goals, services, eligibility criteria, and types of sponsors. Consequently, little comprehensive and reliable data related to program outcomes exist, and variation in program characteristics makes it difficult to generalize research results. Yet, despite these problems, preliminary research suggests that participation in early intervention programs can substantially enhance disadvantaged students’ ability to attend college by influencing many of the factors that promote college enrollment.

This article examines the effect of early intervention programs on students’ expectations about attending college, parents’ expectations about their children’s attending college, course selection in high school, development of academic skills, high school GPA and college entrance examination scores, high school retention and graduation rates, knowledge of postsecondary options, knowledge of admissions