

Brief Number 2: Dropout Prevention Programs; What Research Has to Say About What Works

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In recent years widespread concern has developed around the number of students, particularly black and Hispanic students, who never graduate from high school. A Gates Foundation-funded national dropout study labels the situation a “high school dropout epidemic in America,” and a Johns Hopkins University study that coined the term “dropout factory” to describe certain high schools was afforded front-page coverage in major newspapers across the nation; the study estimated that there are 1,700 such high schools. While it is clear that the dropout problem has become one of the top education issues of the day, much less clear is what should be done about the problem. What programs and policies hold the best promise for reducing dropout rates? And, what does the research base say about dropout prevention programs? These questions are the topics of this brief.

Dropout Prevention: No Shortage of Programs

By all accounts, it is costly to both the individual and to society whenever a student drops out of school without a diploma. Relative to high school graduates, the average dropout can expect lower life-time earnings, decreased employability, and poorer health over the course of their life. From society’s perspective, dropouts are associated with lower tax revenues, greater public assistance costs, and higher crime rates. The large number of students who dropout each year, coupled with the substantial cost per dropout, remind us of the urgent need for programs that might help students stay in school.

In fact, there is no shortage of dropout prevention programs. The Dropout Prevention Center/Network lists hundreds of dropout-prevention programs in its online data base of “model programs”. In thinking about dropout prevention it is useful to categorize interventions into either (1) programs that set dropout prevention as the primary goal and that target specific students or groups of students for assistance or (2) interventions that have a broader goal than dropout

prevention and a broader target audience than “at-risk” students, but that, nevertheless, have lower dropout rates as one of their primary goals. Programs in both categories tend to share some or all of four primary mechanisms for lowering dropout rates:

- increasing school attendance,
- increasing student school engagement and learning,
- building student self-esteem, and
- helping students cope with the challenges and problems that contribute to the likelihood of dropping out.

Given our experience with dropout programs, we tend to have good information on the numbers, types, and structure of existing programs and on the characteristics, numbers, and outcomes of the students that they serve. Unfortunately, we know far less than we would like about the most important question: how effective are these programs at reducing dropout rates? For example, only a handful of the “model programs” cited by the Dropout Prevention Center/Network have been rigorously evaluated for effectiveness.

When one does examine the best available research, it becomes clear that we have not yet developed systematic and widespread methods and programs for addressing the dropout problem. As Mark Dynarski and Philip Gleason write in a report on dropout prevention programs, “Dropping out is as hard to prevent as it is easy to do.” (Dynarski & Gleason 1998). The authors note that this result is consistent to what was found by two earlier U.S. Department of Education sponsored evaluations of other dropout-prevention programs.

What Research Tells Us About Dropout Prevention Programs

There are two overarching messages that should be taken from this briefing report on dropout prevention programs. The first is that it is hard, but not impossible, to design research that can identify the true, causal effect of a dropout prevention program. The second is that when research on the effectiveness of programs is held to a high standard, very few interventions show positive results at reducing dropout rates.

The primary reason that it is hard to design research that tells us which programs work and which programs do not work is that students who participate in dropout prevention programs are seldom a random sample of the relevant population of at-risk students. Students in a given program either self-select into that program, or they are administratively assigned to the program.

Either of these non-random selection processes poses problems for research designed to measure the impact of the program on dropout rates. In particular, just looking at the outcomes of program participants does not tell us how effective or ineffective is a particular program. And without going into detail, suffice to say here that even comparisons that use a comparison group of non-participants and sophisticated statistical techniques often fall short of giving us the true causal impact of a program on dropout rates. These realities mean that one should think carefully about the design and rigor of the evaluation at hand when interpreting research findings about dropout prevention programs.

One of the largest and most rigorous set of evaluations of dropout prevention was a late 1990s study of twenty-one different dropout prevention interventions that were funded between 1991 and 1995 by the U.S. Department of Education under its School Dropout Demonstration Assistance Program (SDDAP). The evaluations of the SDDAP programs were conducted by Mathematica Policy Research, Inc., a research firm noted for well designed and executed impact evaluations. The SDDAP programs included both targeted and broadly defined dropout-prevention efforts. The targeted interventions were usually evaluated through randomized, controlled experiments, while the evaluations of the broad, school-restructuring efforts were quasi-experimental and used observationally similar schools as the comparison group for SDDAP schools.

The evaluations studied sixteen targeted interventions, evenly split between middle and high schools, and five high school restructuring projects. The overarching finding from the SDDAP evaluations is that “most programs made almost no difference in preventing dropping out in general” (Institute of Education Sciences). In particular, only one of the sixteen targeted efforts and none of the high school restructuring efforts showed success at reducing dropout rates.

The successful targeted program in the SDDAP evaluations was an alternative middle school in Flint, Michigan that focused on students who were entering middle school behind grade level. The alternative school provided students with an array of intensive services including extra counseling services and attendance monitoring, challenging curricula, and school outreach to the students’ families. Three years after students were randomly assigned to the Flint program 3 percent of the treatment group had dropped out of school compared to 17 percent of the students in the randomized control group. The extra services of this alternative school cost 22 percent more than the cost for attending regular middle school in Flint (Institute for Education Sciences).

A second source of evaluations of dropout prevention programs that meet recognized levels of rigor is the federally funded What Works Clearinghouse (WWC). The WWC is a U.S. Department of Education sponsored effort to examine the research in seven different education topics to determine which studies meet predetermined levels of rigor, and to make available for a general audience the findings of studies that meet the WWC threshold for rigor. Dropout prevention is one of the areas of study by the WWC.

To date the WWC review of dropout-prevention programs has looked at fifty-nine studies of sixteen dropout prevention programs (Institute for Education Sciences). Ten of the programs had undergone evaluations that were rigorous enough to make it possible to reach firm conclusions about program effectiveness. These ten programs include a wide range of interventions including counseling and monitoring, school restructuring and curriculum redesign, financial incentives for students and families, and community services designed to mitigate factors that can negatively impact school achievement and success. (Institute for Education Sciences)

Five of the ten programs that had been rigorously evaluated showed promise in reducing dropout rates. A sixth intervention, Financial Incentives for Teen Parents to Stay in School, also showed some positive dropout reduction results. However, this intervention is part of state welfare programs and is not a dropout prevention program per se. Two of the five programs with positive results—Achievement for Latinos through Academic Success (ALAS) and High School Redirection—are no longer active.

ALAS was a pilot program launched in San Diego during the early 1990s that was designed to address student, school, family, and community factors that affect dropping out. ALAS participants were assigned a counselor who would monitor attendance, behavior, and academics. In addition to providing feedback to the student on these areas, the counselor was responsible for coordination of services and communication across students, families, and teachers; they were also expected to serve as the student's advocate. On the family side, the program made efforts to train parents in parent-child problem solving, how to participate in school activities, and how to contact teachers and school administrators to address issues. At the end of the ninth grade, 98 percent of the students who were randomly assigned to the ALAS program were still enrolled in school, compared with 83 percent of the students in the non-ALAS control group (Larson & Rumberger). The ALAS intervention costs \$1,185 per student annually in 2005 dollars (Gandara, Mehan & Rumberger, 1998).

High School Redirection was an alternative high school program for youth who had dropped out in the past, who were teen parents, who had poor test scores, or who were over-age for their grade. The program emphasized basic skill development, a small school model, and encouraged teachers to serve as mentors as well as instructors. Three years after random assignment, 43 percent of the students assigned to the High School Redirection program—an alternative high school program for students considered at risk—had dropped out, compared with 53 percent of the randomly assigned control group (Institute of Education Sciences). The additional cost of High School Redirection relative to the regular per pupil cost in the district ranged from an additional 33 percent of annual per pupil expenditure to an additional 15 percent depending on the site (Weinbaum & Baker 1991).

The three remaining positive programs cited in the WWC represent three distinct approaches to dropout prevention. One, Check & Connect, is a relatively intensive program for (mostly) high school students; a second, Career Academies, fits the school-within-a-school model; a third, Talent Development High Schools, is best described as whole-school reform.

The Check & Connect¹ model works with and coordinates services among the student, the family, the school, and the community. The signature feature of Check & Connect is the assignment of a “monitor” to each student in the program, with the monitor serving as the student’s mentor and case worker. In the Check component, the monitor continually assesses the student’s school performance, including attendance, behavior, and academics, with quick follow up at the first sign that a student is struggling in any of these areas.

The Connect component combines individualized attention to the student with the coordination of services and information about the student across school personnel, family, and community service providers. The program carries a minimum two-year commitment to students and families, including the promise and ability to follow highly mobile youth from school to school so that students do not lose services when they move from their original program site.

In two separate experimental evaluations, Check & Connect showed positive effects on staying in school and progressing through school. One study showed that 9 percent of the ninth-grade students enrolled in Check & Connect had dropped out of school by the end of the year compared with 30 percent in the

¹ Information on the *Check & Connect* program was largely synthesized from information found on the *Check & Connect* website at <http://ici.umn.edu/checkandconnect/>.

control group. Another study showed that by the expected graduation year, 39 percent of Check & Connect students had dropped out of school compared with 58 percent of the control group. The high dropout rate associated with both groups reminds us of the dropout risk level present in the population targeted by Check & Connect and most of the other programs mentioned in this brief. The cost of implementing the Check & Connect model was an additional \$1,400 per student during the 2001-02 school year (Institute of Education Sciences).

Career Academies² are another intervention that have shown effectiveness in lowering dropout rates, at least for students most at risk of dropping out. The Career Academy model has three key features. First, it is organized as a school-within-a-school: students in a smaller and more personal learning atmosphere stay with the same teachers over the three or four years of high school. Second, it includes both academic and vocational coursework, with the two integrated in the curriculum and in pedagogy. And, third, it uses partnerships between the academy and local employers to build links between school and work and to provide students with career and work-based learning opportunities. Begun in the 1970s, there are currently some 1,500 Career Academies nationwide that serve a more diverse set of students than the “vocational ed” students who tended to be the original constituents of the academies.

An experimental evaluation of more than 1,700 students who applied for admission to one of nine Career Academies across the nation found that among high-risk youth, the Career Academies reduced the baseline dropout rate of 32 percent by 11 percentage points and that in the students’ projected twelfth-grade year, 40 percent of the high-risk academy students had earned enough credits to graduate compared with only 26 percent of the high-risk students in the control group.³ The best cost estimates are that in 2004 the per pupil cost of educating a student in a Career Academy was \$600 more than the average per pupil cost of non-academy students (Institute for Education Sciences).

² The information on the Career Academy model was largely taken from the MDRC evaluation report. See James J. Kemple and Jason C. Snipes, "Career Academies: Impacts on Students' Engagement and Performance in High School" (New York: MDRC, 2000).

³ James J. Kemple, "Career Academies: Long Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood" (New York: MDRC, 2008). We note two additional facts about the Career Academies evaluation. First, among moderate- to low-risk students, there were no differences in dropout rates or earned high school credits between the Academy and non-Academy students. Second, a longer-term follow-up study found no differences between Academy and non-Academy students in terms of high school completion. We note, however, that high school completion in the later study included both receiving a high school diploma and obtaining a GED.

Though there have been many different high school reform models over the years, there is almost no rigorous evidence that reform high schools lower dropout rates. One exception to this pattern is Talent Development High Schools (TDHS), a reform model developed at Johns Hopkins University. TD high schools are reorganized into small learning communities that feature a curriculum designed to prepare all students for high-level English and math courses, along with measures to increase parent and community involvement in the school. There are now forty-three districts in fifteen states that use the TDHS model (Center for Social Organization of Schools). The added cost of educating students in a TDHS school is about \$350 per student per year (Institute for Education Sciences).

A research design that followed twenty cohorts of ninth graders for up to four years in Philadelphia found that 68 percent of the students in TDHS schools were promoted to tenth grade compared with 60 percent of the comparison group in non-TDHS schools (Kemple, Herlihy & Smith). These findings should probably be viewed with some caution because they are based on a quasi-experimental research design.

An alternative approach to either dropout prevention "programs" or to discrete, redesigned high schools is a more systemic approach that gets carried out at the district level. One example of this approach is the Office of Multiple Pathways to Graduation in the New York City Department of Education. In 2007-2008 this office oversaw 30 "transfer high schools" that served approximately 9,000 students and 22 "Young Adult Borough Centers" (YABC's) that served another 5,500 students. The "transfer high schools" are designed for students who are "over-age and under-credited or have dropped out of school," while the YABC's are organized around evening academic programs for students "who might be considering dropping out because they are behind or because they have adult responsibilities that make attending school in the daytime difficult." YABC students who earn all of the required credits and pass all required exams are subsequently rewarded a high school diploma from their regular high school.

New York's transfer high schools and YACB's try to address drop out risk factors that are difficult for more traditional high schools to address. Not only do these schools try to offer a more individualized and personable education experience, they also tend to offer flexible course scheduling and/or non-traditional school hours along with more support programs for students such as child care for teen parents. A distinguishing feature of the New York system is that the "transfer" high schools and YABC's are embedded in a

district-wide, systemic effort to address the dropout problem, an effort overseen by the district-level Office of Multiple Pathways to Graduation. The effectiveness of such systemic efforts in lowering dropout rates has not yet been evaluated.

Summary

Putting the evidence together suggests that successful dropout prevention programs have at least some of the following five elements in common:

1. Close mentoring and monitoring of students
2. Case management of individual students
3. Family outreach
4. Curricular reform toward either a career-oriented or experiential approach, or alternatively, an emphasis on improving proficiency in the core subjects of math and English
5. Attention to a student's out-of-school problems

In terms of costs, the relatively high costs to society associated with each student dropout suggest that all of the successful programs cited in this brief would pass a societal cost-benefit analysis if we could accurately identify the students who would benefit from a dropout prevention intervention. This turns out to be a nontrivial issue since even the best dropout predictors will place students in programs who do not need the intervention, while at the same time missing students who could benefit from the programs.

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