# From Play to Work: The Effect of Youth Programs on High School Dropout Rates

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## Introduction

The issue of high school dropout rates is a principal concern in the study of the relationship between education and income inequality. Evidence suggests that individuals who drop out of high school have lower future earning potential than those who do not (Kearney and Levine, 2014; Heckman, Lochner and Todd, 2008; National Dropout Prevention Center, n.d.). According to the U.S. Census Bureau's American Community Survey of 2009, median earnings for full-time workers over the age of 25 who have just a high school diploma make on average 35% more than their counterparts with no high school diploma (National Dropout Prevention Center, n.d.). A study from the Employment Policy Foundation points to a 44% annual gain in salary from graduating high school vs. not graduating, and nearly a 43% gain over the course of a lifetime (Doland, 2001). Statistics from The National Center for Education Statistics report that in 1997, 32% of high school students could expect this future differential to affect them in years to come; only 67.1% of students who entered the 9<sup>th</sup> grade in 1993 graduated on time.

Studies looking for factors predicting the likelihood of dropping out generally point to unmeasurable behavioral attitudes that drive apathy and disengagement with school (Heckman and La-Fontaine, 2010). The statistical evidence seems to corroborate these claims: Among the most common reasons for dropping out, 43.5% of dropouts point to having missed too many days of school and 40.5% cite the ease of earning a GED instead. These reasons indicate a lack of motivation to attend school and to be academically challenged; factors indicative of success later in life.

A possible solution towards engaging students' interest and motivation in school may involve appealling to their extracurricular interests. Students who select into youth programs – organizations that offer recreational activities and peer-led academic assistance (Boys' & Girls' Club, n.d.) – may

be subject to positive externalities that lead them to develop a broader sense of commitment, motivation, and self-esteem that may be lacking in their lives otherwise. Network effects may also play a role in these establishments that allow successful students to positively affect their struggling peers in a safe environment. This is a feature of most programs intended to help at-risk students.

In this paper, I explore the possibility that attendance of extracurricular programs intended to motivate and engage students – including youth programs and dropout prevention programs – is associated with a lower likelihood of dropping out for at-risk students. The stated goal of youth, community, and outreach programs is to keep students from engaging in illicit behavior by preoccupying them with activities of interest to them such as sports and help on homework (Boys' & Girls' Club, n.d.). This makes intuitive sense: The opportunity cost of attending these programs is engaging in activities that may serve as factors to dropping out, (e.g. gang involvement, drug use) that may give students the same level of utility as gained from attending a youth program. By reducing the opportunity to engage in activities adverse to high school completion, I expect to see a negative correlation between attendance of a youth program and dropping out of high school.

My preliminary analyses show a statistically significant positive relationship between attendence of youth programs and dropping out. Possible explanations for this result are explored in the proceeding sections.

#### Literature Review

Similar studies on the matter of guaging program effectiveness in dropout rate reduction have focused primarily on vocational training, career academies, or remedial education programs (Wilson et al., 2011). The vast majority of available literature on dropout rates explores the factors and effects of dropping out on high school students later in life. These factors and effects are important to consider when determining what makes a student "at-risk" of dropping out and controlling for other characteristics that may bias these factors.

Heckman, Lochner and Todd (2008) demonstrate that the marginal benefit of graduating high school is even greater than the marginal benefit of graduating college. With the use of nonparametrically estimated earnings functions on data from the Consumer Population Survey, they generate marginal internal rates of return, accounting for taxes and tuition. The authors show that the internal rate of return for blacks to complete high school was 56% in 2000 as compared to 31% for

completing college; the analogous numbers for whites are 52% for completing high school vs. 29% for completing college. They suggest that psychic costs or distaste for schooling may explain why more than 15% of new cohorts of American youth do not receive a high school degree despite its high estimated monetary return. These conclusions call for some intiative that addresses them. Part of my hypothesis is that youth and outreach programs serve as avenues to reduce these pyschic costs and reverse at-risk students' distate for schooling.

Unfortunately, those students who most need to realize these gains – those from areas of low socioeconomic status and lower mobility in general – are those least likely to take advantage of this gain. According to Kearney and Levine (2014), low-SES students have a higher tendency than peers in more equal and mobile areas to drop out of high school. They use regression models to rule out other observable determinants of income distribution and aggregate poverty rates such as racial segregation and school financing, showing that income inequality and lack of mobility reduce the educational attainment of disadvantaged youth males. The paper indicates that AFQT scores are also indicative of so-called "innate ability," which they claim has predictive power towards determining high school dropout rates. While AFQT scores are unavailable from my data set, the 2002 ELS, I use GPA initially as a control to see the effect of youth programs, while also controlling for income gender, and urbanicity of the student's school.

Youth programs are organizations that designed to involve children and teens in activities such as recreation, social life, intervention, prevention, and education. The programs are usually not structured, with student attendance entirely voluntary; usually taking place after school hours and ending in the late evening. Common activites usually consist of sports and homework help from non-professionals. The idea is to instill a sense of support for attendees by engaging with students in and out of the program, with some programs such as Big Brother/Big Sister and the Boys and Girls Club involving personal support at attendees' sports events and school-related extracurricular activities (Boys' & Girls' Club, n.d.). The general tenure of an attendee is from early middle-school to late secondary school. Youth programs differ from other programs because their motivation is simply to provide support and safe spaces for students who are otherwise at risk; they do not have an academic focus that would otherwise indicate they are self-selecting. This is different from the case of arts programs and career academies that have the direct goal of engaging students intellectually, though these programs usually have better attendance rates because of this (Charmaraman and Hall, 2012). Youth program attendance relies on students' desire for leisure, which I assume to be high for

potential dropouts (Eckstein and Wolpin, 1999). Each of these programs, however, share the goal of motivating students to stay in school. The more successful programs are said to create supportive environments that help students overcome their preconceptions about the futility of graduating:

Lack of economic pay-off after graduating and narrow conceptualization of learning (Wehlage, 1989)

Pedersen and Seidman (2005) show that low-income urban youth are less likely to participate in after-school activities, but more likely to be in community activities that offer sports and recreational services like the YMCA and Boys' and Girls' Clubs. They point out that urban youth spent, on average, less than 0.5% of their time in out-of-school activities compared to 1.6% of time forsuburban youth. They show that structured youth programs can help support development for the urban poor, noting results from studies using the 1988 version of the ELS. Their correlates that suggest peers in more suburban, middle class areas have more after-school engagement, while also enjoying a higher standard of living. Socioeconomically, they show that low-income students participate in school-based activities much less than their more-affluent counterparts, with Latino and African American children showing the least engagement in this group. Their paper motivates my theory of the possible positive effect of youth programs in keeping teens in school and nurturing a sense of commitment that spreads to help their peers.

Gaviria and Raphael (2001) also demonstrate that students are affected by their peers' decisions to partake in activities leading to vicious cycles of self-destruction such as chronic drug use and dropping out of high school. Using NELS data, their paper supports the notion that students tend to be affected and influenced by parents and friends alike. I theorize that there can be peer-effects in the opposite direction – one motivated by effective Stay-in-School programs – that boost graduation rates. It may also explain the participation of urban youth in community programs like the Boys and Girls Club or the YMCA. While network effects are not a subject of this paper, it adds to the likelihood of seeing a strong effect on the part of youth programs towards influencing students' attitudes. The paper does not, however, take into account the frequency of students' interactions with each other or its relevance in determining the magnititude of peer influence.

I measure my regression model after factors that affect high school dropout rates; Oreopoulos (2007) explores these characteristics. Among dropouts aged 16 - 25, 24% report dropping out because they did not like school, 44.5% report having another job with 12.6% reporting that they needed the money, and almost 54% reporting, after finishing at least three years beyond the minimum school-leaving age, that they could not go any further, indicating a lack of motivation or self-esteem.

Oreopoulos theorizes that dropouts are myopic in determining their best next step after reaching a dropout-elligible age, not understanding the return to graduating over ephemeral earnings that could result from dropping out. The author finds significant lifetime rewards to wealth, health, and overall happiness from having to stay in school; lifetime earnings increase by 15% for every extra year of mandatory schooling. Given the positive externalities associated with not dropping out, remaining in school one year longer reduces the likelihood of falling below the US poverty line by 6% and falling below Canada's low income-cut-off by 3%.

Eckstein and Wolpin (1999) optimizes the expected present discounted value of utility over an infinite horizon using a state-space that consists of all aspects of the history known to the individual that affects current alternative-specific utilities or the probability distribution of future utilities. This calculation considers the myopic tendency of high school students as described by Oreopoulos (2007). The authors cite lack of motivation, lack of value in graduating, lack of ability (poor grades), and a higher value for leisure as reasons for why students drop out. Many youth programs function as leisure outlets for at-risk students, providing sports and safe-spaces for after school collaboration on work. They may function as sources of motivation for students, providing reasons to stay in school, support for activities, all the while providing the utility Eckstein and Wolpin (1999) claim potential dropouts desire (Boys' & Girls' Club, n.d.).

While many authors point to lack of motivation and disinterest in school as reasons students cite for dropping out, Heppen and Therriault (n.d.) describe quantitative characteristics of dropouts that inform how I define "at-risk." They report that the two most powerful predictors of graduating are class attendence and course performance. In particular, they cite low GPAs of 2.00 or lower – in particular, a high number of Fs early on in the child's secondary school tenure – as indicative of dropout potential. Also important during the child's freshman year and first semesters is their attendance. The authors claim students who miss 10 or more in their first semester are more likely to dropout than their peers.

#### Data

My data is retrieved from the Educational Longitudinal Study of 2002 and its first follow up in 2004 conducted by the U.S. Department of Education, Institute of Education Sciences, and National Center for Education Statistics. Starting in Spring 2002, the study followed students from high

school to their postsecondary education outcomes. It studied over 16,000 students from over 750 public and private high schools and their parents. The purpose of the study was to follow students' trajectories from the beginning of high school into postsecondary education, the workforce and beyond. While second and third follow-ups were conducted in 2006 and 2012, data is collected from the Dropout Questionaire in the first follow-up and from the Student, Parent, and School surveys from the base year for sophomores and seniors.

Given that data for dropouts is only available from the Dropout Questionaire, there is no specific variable that indicates whether a student is a dropout. In order to obtain the measure, I dropped all the students corresponding to legitimate skip responses in the dropout questionaire from the baseline questionaire; these remaining students were dropouts by virtue of their respondence to the Dropout Questionaire. This issue also caused problems for my main explanatory variable of interest, data on youth programs, given that the question of attendence was only asked of dropouts. Amongst dropouts, only 55 had participated in youth programs. This small sample size is likely to result in large standard errors, as it is not very representative of the population. However, when I include other programs such as dropout prevention programs and government programs such as Upward Bound and Gear Up, the sample size is more representative because these questions were asked of all respondents.

Data on the components of my "at-risk" variable are available from all respondents. Though Heppen and Therriault (n.d.) identify 10 as the number of absences in the first semester indicative of an at-risk student, I broaden the risk likelihood to 7 or more times in my own definition because the length of a semester varies between schools, public and private. I also include not only out-of-school absences, but also class-skips of 7 or more and frequent suspensions in my at-risk variable measure. Data on GPA is restricted to all GPAs at or below 2.00 as cited by Heppen and Therriault (n.d.). the data is taken on exactly the at-risk periods of students' tenure at school given that the respondents were in tenth grade, a year off of their freshmen year at the time of the survey. I also have a control for a student "not liking" school, however, I believe this variable to be too subjective to be indicative of a student's likelihood of dropping out. For instance, a student may desire to do something more constructive than school, but understand its importance in the long run, as opposed to actual dropouts who often lack this foresight Oreopoulos (2007)

Each variable of the data set was in the form of categorical data; to create continuous data, I took the midpoint of the ranges represented by the categorical value and dropped all missing values.

Data was available for both the father and mother of the child as varying levels of education, but I chose to control for mothers who dropped out because they are affected by more adverse factors, such as pregnancy and poverty (?). For the income control, I create a continuous variable using the same strategy as that of mother's education. Both of these adjustments are made in order to allow for greater variation of the data.

Other variable categories were condensed such as to give a binary value instead of a categorical value. In creating a measure for peer effects, I included two separate variables: the incidence of a student having a friend drop out and the incidence of having a sibling drop out. For example, if the student had even one sibling or friend who dropped outthe variables were given values of 1. I anticipate that if someone close to a student who drops out is likely of the same background as the student, therefore even knowing just one person may result in the anticipated peer effects. From Oreopoulos (2007), we know that students often cite the acquisition of a job as a reason for dropping out. For this reason, I chose to look at students who had jobs that may have induced them to leave school between the time of the two surveys, assigning them a value of 1 if they had one. On top of being opportunity costs, out-of-school-jobs also take away a student's attention to work.

Other binary controls that I used include the marital status of the student's parents, whether or not a student is male, and the urbanicity of the school (whether the school was located in an urban region), which each are associated with higher dropout rates in the literature (?Pedersen and Seidman, 2005). The urbanicity variable may be biased upward given that the reason it is a control is because of larger concerns of safety at school; urban areas are more likely to be home to crime, with students from an unsafe neighborhood coming from this sort of background. For this reason, I include controls for the student's parents' perception of the safety of their neighborhood and that of their school. The student's home environment may be correlated with an increased risk to drop out because these are the very factors that attending a youth program attempt to counteract.

There were quite a few controls identified in the literature that were unavailable to the public from the ELS. This includes race and the public/private nature of a school. Some variables were only available from dropouts, but without available corresonding data in the baseline questionaire, these variables would have had low sample size. In particular, a control for whether a student thought it would be easier to get a GED than graduate suffered this fate. According to Heckman and Cameron (1991), students who dropout to obtain a GED not only show the lack-of motivation that is characteristic of lower future earning potential, but also do not realize the same gain as if they

had graduated given the nonequivalency of the degrees in the marketplace. Incidence of pregnancy also suffered from the same sample size restriction. Table 1 provides a summary of means for the variables used.

## Empirical Strategy

The challenge posed by the research question does not lend itself well to causative inference given the available data. In particular, because the selection of the at-risk students and students attending a youth program is nonrandom, we expect there to be some unobservable characteristics that will bias the sample causing unresolvable endogeneity issues. For this reason, any statistically significant explanation implied by my regression analyses can only be taken as correlative. The main regression equation that I will estimate will measure whether being an at-risk student who attended a youth program is associated with a lower likelihood of dropping out of high school:

$$DROPOUT = \beta_0 + \beta_1 AT RISK \cdot PROGRAM + \beta_2 AT RISK + \beta_3 PEER EFFECTS + \beta_4 DEMO + \epsilon_i$$

$$\tag{1}$$

The dependent variable, DROPOUT, is a binary variable taking the value of 1 or 0 given the set of explanatory variables. Given the binary nature of the dependent variable, I chose to use a dprobit model. The key coefficient of interest is  $\beta_1$  on the interaction term  $AT\_RISK \cdot PROGRAM$ . Based on my hypothesis, I expect to see a negative, statistically significant coefficient for this term that, when added to the positive, statistically significant coefficient expected of  $AT\_RISK$ , is expected to produce an overall negative marginal effect. This effect would mean there is associated likelihood of at-risk students who attend youth or outreach programs of graduating at a higher rate that at-risk students who do not attend youth or outreach programs. The bias on the coefficient of the interaction term is likely to biased upward; I anticipate the omitted variables to explain some of the reasons why so-called at-risk students attend youth programs, which are likely factors that tend to reduce dropout rates (e.g. proactive behavior, commitment, motivation). This would mean the interaction term is correlated positively with the error term.

I will also estimate the associated likelihood of peer effects on a student's dropout outcome,

such as the associated likelihood of a sibling or a friend dropping out on that student also dropping out, represented by the vector  $PEER\_EFFECTS$ . The SENTIMENTS vector represents the set of control variables that are the student's and her family's feelings regarding the school and its opportunities. This set of variables includes whether the school is safe, whether the student's neighborhood is safe, job status of the student, and whether the student likes school. Controls for income level, school urbanicity, being a male, low mother's education, and parents' marital status are represented as the vector DEMO. Given that I have very few continuous variables and thus very little variation in an already sample size constrained regression, I expect to have quite a few insignificant variables.

In the initial regression that I will run, I look at the full effect of the PROGRAM variable on the outcome of DROPOUT without any controls in order to determine whether, all factors considered, being in a youth or outreach program is associated with a reduced likelihood of dropping out. My second regression will include all controls including  $AT\_RISK$  without the interaction term so as to see the control effect of each of the variables. My last regression will be that seen in (1).

## Results

The results of the probit regression, (1), are shown in Table 2 (page 9, not numbered yet). Immediately we see that the coefficient for youth programs is statistically significant, but positive. This implies that attending a youth program increases the likelihood of dropping out of high school. There are many possible reasons for this result, one being – as mentioned in the previous section – that the sample size is far too small. It may be possible that being in the youth program with students who are already at risk actually has the effect of increasing the likelihood of dropping out given peer effects. For instance, one student who is at risk may be friend another student in the youth program who may not have been at risk, but influences him in a manner that makes the student become at risk as well. This is supported by the results of the regression where peer-effects are shown to have a statistically significant and positive effect on a student's decision to drop out.

The controls for how much a student wants to be in school are statistically significant and in a positive direction, corroborating the effect of previous research identifying lack of motivation as a major factor of dropping out. In particular, the variables that account for peer-effects – a sibiling or friend dropping out and parental matrimony – are all statistically significant. Students with married

parents are less likely to drop out of high school, but students with peers who have dropped out are more likely to drop out themselves, with the coefficients being positive.

Several variables we would expect to have positive, statistically significant coefficients, such as urbanicity of the school and male, are statistically insignificant. It may be that males are only more likely to drop out if they are of low income. Similarly, students in urban areas may be likely to drop out only if they are of low income; however, in both cases just mentioned, income is controlled for and is statistically significant at the 1% level. Moreover, students in urban areas who are not of low income tend to benefit from agglomeration economies that could have a positive effect on their education level.

Another interesting result in Table 2 is the statistical insignificance of having worked for pay, although the coefficient is positive, the expected direction indicating it contributes to dropping out. This control was used to account for students having an opportunity for compensation that drives them away from school; particularly if they had a job at the time of the baseline measure. However, if the student had lost their job or quit in the time between the baseline and first follow-up, the job would have no relevance when considering its effect on dropping out.

To further analyze the relationship between dropping out and the attendance of youth programs, I also ran a probit regression with an interaction term between being low income and participating in youth program. The results can be seen in Table 3 (page 10, not numbered yet).

None of the other variables change in significance. The additional interaction term, low income and in a youth program, while insignificant, has a negative coefficient, indicating that poor youths attending a youth program may have a lower probability of dropping out, if it were significant. Perhaps the cutoff for low income – up to income of \$50000 – is too high, and that a lower cutoff that is more in line with the actual poverty rate may result in a statistically significant coefficient. This interaction term may filter out those dropouts who were of higher income, which was a concern for the original probit model given that all the data regarding youth program attendance came only from dropouts.

## Conclusion

The purpose of this paper was to investigate the effect of attending a youth program such as the Boys and Girls Club or the YMCA on dropping out of high school. The method of investigation involved a probit regression on data from the 2002 ELS baseline and the 2004 followup, specifically data on being a dropout, data on dropouts who attended a youth program, and controls for traditional reasons for dropping out as identified in the literature. The results from the corresponding regression show inconclusive results. The coefficient for attending a youth program is statistically significant, but positive, indicating that attending a youth program may actually contribute to dropping out. There may be many reasons for why this was so, among them low sample size or bias in that the samples were drawn only from dropouts. For example, the fact that peer effects such as a sibling or friend dropping out of high school is statistically significant and positive may provide an explanation: Students who befriend at-risk youth at these youth programs may themselves be inspired to dropout.

Perhaps these organization are not doing enough to just keep students off the streets as they claim to do (Boys' & Girls' Club, n.d.); perhaps they need individual mentors to influence them, guide them, and motivate them to succeed. In this way, students who do not have a stable household or have friends who are at risk will also have positive forces in their life who influence them in a direction that will motivate them and work to keep them in school. Perhaps youth programs such as Big Brother Big Sister may provide such a positive force who then can influence at-risk youth children in a more positive direction.

Future researchers would be wise to look into attendance of specific programs to see their individual effect. If possible, they should find data on both dropout and non-dropout attendance in youth programs to achieve a larger, unbiased sample size with random data instead of the obvious bias introduced when drawing explanatory samples from the dependent variable being analyzed.

Table 2: Youth Program/UB	dropout
in_program	0.112 (2.95)**
mother_low_edu	0.026 (3.57)**
parents_married	-0.011 (2.02)*
low_income	0.014 (3.25)**
male	0.003 (0.87)
urban_school	0.002 (0.51)
doesnt_like_school	0.014 (2.19)*
missed_school_often	0.017 (4.16)**
cut_class_often	0.030 (3.71)**
worked_for_pay	0.007
sibling_dropped	0.035 (4.60)**
friend_dropped_out	0.111 (18.39)**
N	7,386

UB = Upward Bound; \* *p*<0.05; \*\* *p*<0.01

Table 3: Poor and in YP	dropout
poor_and_youthprog	-0.020 (1.32) <sup>++</sup>
in_program	$0.195$ $(1.65)^{+}$
mother_low_edu	0.026 (3.54)**
parents_married	-0.010 (2.02)*
low_income	0.014 (3.33)**
male	0.003 (0.86)
urban_school	0.002 (0.49)
doesnt_like_school	0.014 (2.19)*
missed_school_often	0.017 (4.15)**
cut_class_often	0.030 (3.69)**
worked_for_pay	0.007 (1.47)
sibling_dropped	0.035 (4.60)**
friend_dropped_out	0.111 (18.38)**
N	7,386

YP = Youth Program; ++ p<0.20; + p<0.10; \* p<0.05; \*\* p<0.01

## References

- Boys' & Girls' Club. n.d.. "Boys' & Girls' Club Website." http://bgca.org/whoweare/Pages/WhoWeAre.aspx.
- Charmaraman, Linda, and Georgia Hall. 2012. "School dropout prevention: What arts-based community and out-of-school-time programs can contribute." NIH Public Access.
- Doland, E. 2001. "Give yourself the gift of a degree." Employment Policy Foundation.
- Eckstein, Zvi, and Kenneth I. Wolpin. 1999. "Why Youths Drop Out of High School: The Impact of Preferences, Opportunities, and Abilities." *Econometrica*, 67(6): 1295–1339.
- Gaviria, Alejandro, and Steven Raphael. 2001. "School-Based Peer Effects and Juvenile Behavior." The Review of Economics and Statistics, 83(2): 257–268.
- **Heckman, James J., and Paul A. LaFontaine.** 2010. "The American High School Graduation Rate: Trends and Levels." *Review of Economics and Statistics*, 92(2): 242–262.
- **Heckman, James J., and Stephen V. Cameron.** 1991. "The Nonequivalence of High School Equivalents." *NBER Working Paper*, 3804.
- Heckman, James J., and Stephen V. Cameron. 2001. "The Dynamics of Educational Attainment for Black, Hispanic, and White Males." *Journal of Political Economy*, 109(3).
- Heckman, James J., Lance J. Lochner, and Petra E. Todd. 2008. "Earnings Functions and Rates of Return." *IZADP Discussion Papers*, 3310.
- Heppen, Jessica В., and Susan **Bowles** Therriault. n.d.. "Develop-Dropouts." Early Warning Systems Identify Potential High School ing http]://www.betterhighschools.org/pubs/ews\_guide.asp.
- Kearney, Meliss S., and Phillip B. Levine. 2014. "Income Inequality, Social Mobility, and the Decision to Drop Out of High School." NBER Working Paper, 20195.
- National Dropout Prevention Center. n.d.. "Quick Facts." http://www.dropoutprevention.org/.
- **Oreopoulos, Philip.** 2007. "Do dropouts drop out too soon? Wealth, health and happiness from compulsory schooling." *Elsevier B.V.*

Pedersen, Sara, and Edward Seidman. 2005. "Contexts and Correlates of Out-of-School Activity Participation Among Low-Income Urban Adolescents." In Organized Activities As Contexts of Development., ed. Joseph L. Mahoney, Reed W. Larson and Jacquelynne S. Eccles, 85–109. Psychology Press.

Piketty, Thomas, and Emmanuel Saez. 2014. "Inequality in the Long Run." Science, 344(6186).

**Tyler, John H., and Magnus Lofstrom.** 2009. "Finishing High School: Alternative Pathways and Dropout Recovery." *The Future of Children*, 19(1): 77–103.

Wehlage, Gary G. 1989. "Reducing the Risk: Schools as Communities of Support." Institute of Education Science.

Wilson, Sandra Jo, Mark W. Lipsey Emily E. Tanner-Smith, Katarzyna Steinka-Fry, and Jan Morrison. 2011. "Dropout Prevention and Intervention Programs: Effects on School Completion and Dropout among School-aged Children and Youth." Campbell Systematic Reviews, 7(8).